TRANSCRIPT OF RECORD

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1931

No. 457

PATRICK J. HURLEY ET AL., PETITIONERS

vs.

R. FOSTER KINCAID, SR.

ON WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE FIFTH CIRCUIT

PETITION FOR CERTIORARI FILED OCTOBER 13, 1931
CERTIORARI GRANTED NOVEMBER 23, 1931

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[Caption omitted.]

1 In United States District Court for the Western District of Louisiana, Monroe Division

R. FOSTER KINKAID, SR. *vs.* THE UNITED STATES GOVERNMENT, JAMES W. GOOD, Secretary of War, Major General Edgar Jadwin, The Mississippi River Commission, Brig. Gen. T. H. Jackson, Charles H. West, Robert L. Faris, John H. Stipes, Col. Jarvis Bain, and Major Ernest Graves, Members of the Mississippi River Commission, and Major John C. H. Lee	No. 355 in equity

Bill of Complaint

Filed June 15, 1929

Now comes the complainant herein, and files this, his bill of complaint, against the above-named defendants, and for such bill says:

I

Complainant is a citizen of the State of Louisiana, and a resident and inhabitant of Franklin Parish, in the State of Louisiana, within the Western District of Louisiana, Monroe Division.

II

This bill of complaint is against The United States Government, James W. Good, Secretary of War, an inhabitant or resident of the city of Washington, District of Columbia; Major General Edgar Jadwin, Chief of Engineers, United States Army, an inhabitant or resident of the city of Washington, District of Columbia; Mississippi River Commission, a Federal commission created and existing under and by virtue of an act of Congress, dated June 28, 1879, with headquarters and general offices located in the United States customhouse, in the city of St. Louis, in the State of Missouri; Brig. Gen. T. H. Jackson, an inhabitant or resident of the city of St. Louis, in the State of Missouri, and president of the Mississippi River Commission; Charles H. West, an inhabitant or resident of Greenville, in the State of Mississippi; Robert L. Faris, an inhabitant or resident of the city of Washington, in the District of Columbia; Edward Flad, an inhabitant or resident of the city of St. Louis, in the State of Missouri; John H. Stipes, an inhabitant or resident of Champaign, in the State of Illinois; Col. Jarvis Bain, an inhabitant or resident of the city of Pittsburgh, in the State of Pennsylvania; and Major Ernest Graves, an inhabitant or resident of the city of

Washington, in the District of Columbia; Major John C. H. Lee, a resident of and an inhabitant of Vicksburg, State of Mississippi; that, with the exception of James W. Good, Secretary of War, Major General Edgar Jadwin, Chief of Engineers, and Major John C. H. Lee, the above-named individual defendants are members of and compose the Mississippi River Commission.

2

III

This suit is of a civil nature and is a controversy arising under the Constitution and laws of the United States, to wit, the fifth amendment to the Constitution of the United States and an act of Congress (being Public Document No. 390, 70th Congress, Senate Bill 3740), entitled "An Act for the control of floods on the Mississippi River and its tributaries, and for other purposes," approved May 15, 1928.

That this is also a suit of local nature and involves the title of land situated in the western district of Louisiana.

That the amount of controversy herein, exclusive of interests and costs, exceeds the value of $3,000.00 and is less than the value of $10,000.00.

IV

Complainant would state that under the act of Congress of May 15, 1928 (which for the sake of brevity will be called "Flood control act"), the United States Government adopted a project for the flood control of the Mississippi River in its alluvial valley and for its improvement from the Head of Passes to Cape Girardeau, Missouri, in accordance with the engineering plan set forth and recommended in the report submitted by the Chief of Engineers to the Secretary of War, dated December 1, 1927, and printed in House Document No. 90, Seventieth Congress, first session. The flood control act provided that a board, to consist of the Chief of Engineers, the president of the Mississippi River Commission, and a civilian engineer chosen from civil life, to be appointed by the President, by and with the advice and consent of the Senate, whose compensation shall be fixed by the President and paid out of the appropriations made to carry out this project; and such board was authorized and directed to consider the engineering differences between the adopted project and the plans recommended by the Mississippi River Commission in its special report dated November 28, 1927; that said board was required to make its report to the President and to recommend to the President such action as it might deem necessary to be taken in respect to such engineering differences; and the decision of the President upon all recommendations or questions submitted to him by such board was to be followed in carrying out the project therein adopted.

Said board in due course, to wit, on August 8, 1928, submitted its report and recommendation to the President, and said report and

recommendation as to all engineering differences was adopted and approved by the President.

That said project differed from the old flood control system of levees and levees only, by the creation of certain diversion channels. The Chief of Engineers, in his report to the Secretary of War, which was submitted by the Secretary of War to the Congress, states that—

"The recommended plan fundamentally differs from the present project (levees only) (parenthesis ours) in that it limits the amount of flood water carried in the main river to its safe capacity and sends the surplus water through lateral floodways. Its essential features and their functions are: Floodways from Cairo to New Ma-
3 drid, from the Arkansas River through the Tensas Basin to the Red River and from the Red through the Atchafalaya Basin to the Gulf of Mexico. These will relieve the main channel of the water it can not carry and lower the floods to stages at which the levees can carry them. A controlled spillway to hold the levels down to safe stages at and near New Orleans."

That, in pursuance of and in the carrying out of said project, the United States Government, and James W. Good, Secretary of War, Maj. Gen. Edgar Jadwin, Chief of Engineers, and the Mississippi River Commission, and Maj. John C. H. Lee, pretending to be acting under authority of an act of Congress of the United States, adopted and approved on May 15, 1928, are preparing to construct a certain floodway or diversion channel, designated under the adopted project as the Boeuf Floodway or Diversion Channel. The purpose of this floodway or diversion channel is to divert water from the main channel of the Mississippi River into the basin of this floodway and to use this basin as a diversion channel to lower the level of the water in the Mississippi River and to carry it through this diversion channel to some other point. The primary purpose of this diversion channel is to relieve or lessen the height of the water in the main channel of the Mississippi River from Cape Girardeau to the Passes, both on the east bank and on the west bank, and is a part of the adopted project to control floods in the Mississippi River. It is not intended in any way for the benefit of the property owners in the floowway or diversion channel. On the contrary, property situated in the area of this diversion channel or floodway would be destroyed or rendered valueless.

Section 4 of the flood control act of May 15, 1928, provides as follows:

"Sec. 4. The United States shall provide flowage rights for additional destructive flood waters that will pass by reason of diversions from the main channel of the Mississippi River * * *.

The water that will flow into the Boeuf Floodway or Diversion Channel will all be diverted from the main channel of the Mississippi River. The main levee of the Mississippi River at this point will be retained, but will be raised above and below so that, at this point, it will be lower than the levee above and below, and will con-

stitute what Major General Jadwin terms in his report as a fuze-plug levee, is solely for the purpose of having the water break over same at flood tide and flood this diversion channel or floodway. In other words, it is an uncontrolled spillway. Guide levees are to be constructed on each side of this basin. The width of the basin between the guide levees will be from approximately eight to eighteen miles wide, extending from Cypress Creek to the Red River. The construction of these guide levees will have the effect of making a floodway or pocket for the flow of water intentionally diverted from the Mississippi River through this diversion channel, and this diverted water will have the effect of destroying the value of all property situated within the flood area. The project adopted by Congress in the flood control act of May 15, 1928, specifically set apart this diversion channel or floodway as a part of the project, and, as stated above, the said agents of the Government are now proceeding to construct the guide levees, so as to enclose this diversion channel and specifically define its boundaries and is designedly making this channel a floodway or diversion channel. The Government, through its agents, the Secretary of War, Major General Jadwin, and the Mississippi River Commission, has publicly announced, and it is a notorious fact, that the property in this diversion channel is to be used as a floodway; and the Secretary of War, acting through Major General Jadwin, Chief Engineer, is, at this time, advertising for and receiving bids for the construction of the guide levees to enclose this channel, which will have the effect of fixing the bounds of this diversion channel and floodway, and at floodwater it is intended, by the use of what the Government designates as fuze plugs or low places in the main levee, to flood this entire channel so fixed and designated by them as such, the lands and properties located between the guide levees and the main levee to be the floor of the floodway or diversion channel.

V

Complainant would respectfully state that he owns and is at this time in possession of valuable lands, with improvements thereon, which are located within the area or the bounds of this diversion channel or floodway. These lands are described as follows:

"Situated, lying and being in the Parish of Franklin, in the State of Louisiana, and more particularly described as follows:

"SW. ¼ of SW. ¼ sec. 5, NE. ¼ of NE. ¼ sec. 7, N, ½ of NW. ¼ sec. 8, T. 12, R. 6, containing 160 acres."

The value of these lands affected or taken for this diversion channel or floodway will approximate the sum of $9,000.00 in value.

That the above-described lands lie within the area affected by said proposed plan and within the area which will be surrounded by the guide levees and the main river; that, as above stated, all of said lands are highly improved and are, at this time, being used for agricultural purposes; that there are located thereon complainant's

residence and other valuable farm buildings; that, at this time, all of complainant's above-described lands lie back of the Mississippi River levee and are protected at all times from the waters of the Mississippi River, if the levees hold.

That in the construction of said proposed guide levees all of complainant's above-described lands will be taken and used for floodway or diversion channel and will become a part of the floodway and diversion channel and be subject to overflow from the Mississippi River in time of flood, and, under the adopted project, it is intended that they shall be flooded; that said land will be rendered unfit for agricultural purposes or for any other purpose save that of serving as a part of a floodway or storage basin when the Mississippi River is at flood stage.

That the defendants, Major General Jadwin, the Mississippi River Commission, and Major Lee, pretending to be acting under authority of an act of Congress of the United States adopted and approved May 15, 1928, are proceeding with the work of constructing said proposed guide levees and other construction work incident thereto in the carrying out of the project adopted by Congress; that this will, in effect, be the taking by the United States Government of all of said above-described real estate belonging to said complainant for the purpose of carrying out said project without due process of law and without just compensation.

That the War Department, acting through United States Engineers' Office, at this time is advertising for bids for the construction of these guide levees, and, unless restrained from doing so, bids will be received on June 17, 1929, and contracts let thereon in due course.

That the overt acts of the defendants, Major General Jadwin, the Mississippi River Commission, and Major Lee, pretending to act under an act of Congress of May 15, 1928, in advertising for bids for the letting of contracts for the doing of said work in the construction of said guide levees, in proposing to award contracts for the construction of said proposed guide levees will mean the taking by the United States Government of complainant's lands and properties without due process of law and without just compensation.

VI

That the acts of the defendants in setting apart this property as a floodway and diversion channel and in advertising for and receiving bids for the doing of the proposed work, to wit, the construction of the guide levees and the contemplated acts of the defendants in the awarding of contracts therefore, has already had the effect of casting a cloud upon the title of complainant to his said lands and properties and have materially affected his use and enjoyment of same and have materially affected and impaired the value thereof. That, the result of setting apart this area as a floodway or diversion channel and the publication by defendants of said advertisements for bids for the construction of the guide levees, this

property has not only deteriorated in value but complainant's title to same has been seriously clouded, his use of same has been seriously affected, and complainant would be unable to borrow money on said lands, sell or dispose of same, or interest persons in operating said lands for farms or for any other purposes, owing to the fact that the Government has indicated that it has taken possession or intends to take immediate possession of this property for a diversion channel or a floodway. That, as a result of making this area, in which complainant's lands and those of others are situated, a floodway or diversion channel, these lands will be rendered unfit for agricultural or any other purpose. That the title to complainant's lands is seriously clouded by said acts, and his ability to use said properties or obtain credit thereon is seriously affected, and, as stated above, this property is well worth the sum of $9,000.00.

Complainant would further state that, although the flood control act of May 15, 1928, sec. 4 above recited, and the Constitution of the United States, fifth amendment, which provides—" * * * nor shall any person * * * be deprived of life, liberty, or property without due process of law, nor shall private property be taken for public use without just compensation," require the United States Government to justly compensate complainant for his property taken, damaged, or destroyed, the defendants herein are not complying in any way either with the constitutional provision or with the provision of sec. 4 of the flood control act. Without having
6 obtained complaint's property, without having commenced any condemnation proceedings, they are proceeding to take over property in this area, enclose same with levees, and designedly overflow same during floodwater. That no condemnation proceeding has been commenced against complainant for this property, no compensation has been paid him or offered him, but the said agents of the United States Government are seeking to award contracts for the immediate construction of the guide levees and to make a diversion or floodway channel in this area.

That the damage to this complainant will be irreparable; that it is a well-known fact that any suit against the United States to recover money for damages or property is subject to interminable delays and is very expensive. Complainant would further state that if said contracts for the guide levees are awarded before complainant has been compensated for his property or secured in the payment of compensation for same, the contracts would involve such large sums that complainant would be unable to give bond sufficient to enjoin same and thus protect his property from confiscation by reason of the proposed unlawful acts of the defendants. That complainant has no remedy at law, and if said contracts are awarded he will immediately suffer irreparable injury and loss.

Complainant would further state that under sec. 4 of the flood control act of May 15, 1928, it is provided that the Secretary of War may cause proceedings to be instituted for the acquirement by con-

demnation of any lands, easements, or rights of way which, in the opinion of the Secretary of War and the Chief of Engineers, are needed in carrying out this project. The Secretary of War and the Chief of Engineers have already agreed and notoriously announced that property in the Boeuf floodway or area is necessary to carry out the project. The said section 4 provided that "when the owner of any land, easement, or right of way shall fix a price for the same which, in the opinion of the Secretary of War is reasonable, he may purchase the same at such price." Complainant has never fixed a price upon his land, nor donated or conveyed same to the Government, nor has the Secretary of War tendered to him any price for same, nor has any condemnation proceeding been commenced to acquire same.

The said act further provides, in section 4, that if condemnation proceedings are commenced to obtain properties which, in the opinion of the Secretary of War and the Chief of Engineers, are needed to carry out the project, the proceedings will be under the provisions of sections 5 and 6 of the river and harbor act of July 18, 1918. Section 5 of that act expressly provides that before the United States can acquire possession of property needed it shall first file its petition for condemnation, after which it shall have the right to take immediate possession of said lands and proceed with the public works thereon only upon the following conditions: "That certain and adequate provision shall have been made for the payment of just compensation to the party or parties entitled thereto, either by previous appropriation by the United States or by the deposit of moneys or other form of security in such amount and form as shall be approved by the court in which such proceeding shall be instituted."

The defendants herein are undertaking to take possession of complainant's property without first filing a condemnation suit or
7 without first purchasing same from him. - That the construction of the guide levees will, in effect, be taking possession of complaint's property by the United States Government without just compensation to complainant."

Premises considered, complainant prays:

That process issue and be served upon the defendants herein in accordance with law; that the defendants, and each of them, and their agents, and all persons acting in aid or assistance of them or any of them, be perpetually restrained and enjoined from carrying out any work on the said Boeuf floodway and from performing any such work themselves, and especially enjoining and restraining them from receiving bids and awarding contracts for the guide levees herein described;

That, pending final hearing, a temporary restraining order be entered by this Court restraining the defendants and each of them, their agents, attorneys, and servants from awarding the contracts for

the building of the proposed guide levees, or from doing said work themselves, until further order of this court;

And complainant prays for such other further and general relief as to a court of equity and good conscience may seem meet and proper in the premises.

WILLIAM C. DUFOUR,
JOHN ST. PAUL, JR.,
HARRY H. RUSSELL,
C. J. ELLIS, JR.,
STREET and BURNSIDE,
Attorneys for Complainant.

[Title omitted.]

Now comes R. Foster Kincaid, sr., complainant in the above styled and numbered cause, and, in support of his application for a temporary restraining order, as prayed for in said bill, and, in addition to the grounds alleged in said bill as to why said restraining order should be issued, says that, owing to the fact that the defendants in this cause are located in various districts other than the district in which this suit is filed, it will take possibly more than a week to obtain service upon them;

8 That, in the meantime, the Government will make contracts set forth in the bill, and plaintiff will be deprived of his remedy, and, for this reason and the reasons set forth in the bill, he asks that temporary restraining order be issued.

R. FOSTER KINCAID, SR.

Subscribed and sworn to before me, the undersigned notary public of Franklin Parish, State of Louisiana, this 14 day of June, 1929.

[SEAL.] J. R. DONNELL,
Dy. Clk, Notary Public.

Duly sworn to by R. Foster Kincaid, sr.; jurat omitted in printing.

In United States District Court

Order to show cause

The foregoing application and affidavit considered.

It is ordered that the defendants herein show cause before this court at Monroe, Louisiana, at 10 o'clock a. m., July 15, 1929, why a preliminary injunction should not issue as prayed for.

Shreveport, Louisiana, this 15th day of June, A. D. 1929.

BEN C. DAWKINS,
U. S. Judge.

[File endorsement omitted.]

In United States District Court

[Title omitted.]

Motion to dismiss

Filed July 16, 1929

To the honorable BEN C. DAWKINS, Judge of said court:

Now come the respondents and each of them, through undersigned counsel, in the above numbered and entitled matter, appearing
9 herein solely and only for the purpose of this motion, and with full reservation of all rights of all of them and each and all of them, and move this honorable court to dismiss the complainant's bill of complaint for the following reasons and because of the following grounds, namely:

1. That this court is without jurisdiction.

2. That the United States is a sovereign power and can not be sued without its consent.

3. That a suit against the other defendants is, in effect, a suit against the United States and that an official of the Government of the United States can not be sued when there is no personal judgment sought against him and he has no personal interest in the matter involved.

4. That the court has no jurisdiction under the bill of complaint.

5. That there is a misjoiner of parties defendant herein.

6. That it appears from the bill of complaint, with the exception of the United States, that the respondents therein named are not acting in a personal or individual capacity, or engaged in the performance of any act or acts other than those prescribed by the laws of the United States, and all of their acts are official and as the representatives of the United States.

7. That the complainant is not entitled to relief in equity inasmuch as he has a plain, adequate, and complete remedy at law.

8. In the alternative, and only in the alternative, should the court overrule this motion to dismiss for *for* all of the above and foregoing reasons, then and in that event respondents show that the said bill of complaint discloses no cause of action or no right of action.

Wherefore, respondents, and each of them, pray that this motion to dismiss be sustained and that this complainant's bill be dismissed with costs, and in the alternative, and only in the alternative, should this motion to dismiss be overruled by the court after considering the grounds in the order pleaded, then and in that event your respondents' rights to further plead hereto be specially reserved to them; they pray for all necessary orders and decrees and for full and general relief.

By their solicitors:

PHILIP H. MECOM,
United States Attorney.
J. O. MODISETTE,
Special Assistant U. S. Attorney.

CERTIFICATE OF SERVICE

We hereby certify that a true and correct copy of the above and foregoing motion to dismiss has this day been deposited in the United States mail at Shreveport, properly addressed to each of counsel of record for the complainant in the above and foregoing cause.

Shreveport, Louisiana, July 16, 1929.

By their solicitors:

PHILIP H. MECOM,
United States Attorney.
J. O. MODISETTE,
Special Assistant U. S. Attorney.

[File endorsement omitted.]

10 In United States District Court for the Western District of Louisiana, Monroe Division

No. 355 in equity

R. FOSTER KINCAID, COMPLAINANT

vs.

UNITED STATES OF AMERICA ET AL., RESPONDENTS

Col. Wm. C. Dufour, Mr. John St. Paul, jr., Mr. J. T. Freeman, New Orleans, Louisiana; Mr. Harry H. Russell, Monroe, Louisiana; Mr. C. J. Ellis, Rayville, Louisiana; Messrs. Street & Burnside, Lake Village, Arkansas, for the plaintiff.

Mr. Philip H. Mecum, U. S. attorney; Mr. J. O. Modisette, special Asst. U. S. attorney, Shreveport, La.; Mr. John C. Dyott, special Asst. U. S. attorney, St. Louis, Mo., for the Government.

Opinion on motion to dismiss

Filed Aug. 14, 1929

DAWKINS, J.:

This is a suit in equity against the United States, the Secretary of War, Chief of Engineers, the Mississippi River Commission and its individual members, and the district engineer in charge of work in this district to enjoin the construction of certain levees and other works contemplated by the act of Congress approved May 15, 1928, 70th Congress, Pub. No. 391, commonly known as the flood control act.

The plaintiff alleges that he is the owner in fee simple of 160 acres of land, with improvements thereon of the value of the $9,000.00, situated between the levees to be constructed on either side of the

Boeuf River Basin and within the channel through which a portion of the waters from the main stream of the Mississippi River will be diverted at flood stage by what is called a "fuse-plug" outlet, located just below Arkansas City, in the State of Arkansas; that the purpose is to use this basin as a diversion channel to lower the level of water in the Mississippi River and to carry it into Red River at or near the head of the Atchafalaya; that the effect will be to relieve the pressure on the main levees and to protect property on both sides of the Mississippi from Cape Girardeau, Missouri, to the Passes, as a part of the adopted project to control flood waters in the Mississippi Valley, and that it is not intended in any way for the benefit of the property within said floodway or diversion channel, but, on the contrary, the same will be destroyed and rendered valueless. The plaintiff further alleges as follows:

"The water that will flow into the Boeuf Floodway or Diversion Channel will all be diverted from the main channel of the Mississippi River. The main levee of the Mississippi River at this point will be retained, but will be raised above and below so that, at this point, it will be lower than the levee above and below, and will constitute what Major General Jadwin terms in his report as a fuse-plug levee. The purpose of leaving this levee lower or creating a fuse-plug levee is solely for the purpose of having the water break over same at flood tide and flood this diversion channel of floodway. In other words, it is an uncontrolled spillway. Guide levees are to be constructed on each side of this basin.

11 The width of the basin between the guide levees will be from approximately eight to eighteen miles wide, extending from Cypress Creek to the Red River. The construction of these guide levees will have the effect of making a floodway or pocket for the flow of water intentionally diverted from the Mississippi River through this diversion channel, and this diverted water will have the effect of destroying the value of all property situated within the flood area. The project adopted by Congress in the flood control act of May 15, 1928, specifically set apart this diversion channel or floodway as a part of the project, and, as stated above, the said agents of the Government are now proceeding to construct the guide levees so as to enclose this diversion channel and specifically define its boundaries and is designedly making this channel a floodway or diversion channel. The Government, through its agents, the Secretary of War, Major General Jadwin, and the Mississippi River Commission, has publicly announced, and it is a notorious fact, that the property in this diversion channel is to be used as a floodway; and the Secretary of War, acting through Maj. General Jadwin, Chief Engineer, is, at this time, advertising for and receiving bids for the construction of the guide levees to enclose this channel which will have the effect of fixing the bounds of this diversion channel and floodway, and at floodwater it is intended by the use of what the Government designates as fuse plugs or low places in the

main levee, to flood this entire channel, so fixed and designated by them as such, the lands and properties located between the guide levees and the main levee to be the floor of the floodway or diversion channel."

He also alleges that his said land is at this time in a high state of cultivation and has thereon his residence and other valuable buildings; that it now lies back of the Mississippi River levees and is protected at all times from the waters of that river, "if the levees hold"; that if the proposed plan is carried out it is purposely intended that his property, with that of others, will form the bed of said diversion channel and serve as a storage basin for waters of the Mississippi, making it wholly unfit for farming, for which it is solely valuable; that this will, in effect, be the taking of petitioner's property by the Government without due process of law and without just compensation, contrary to the 14th and 5th amendments to the Federal Constitution; and that defendants are now advertising for bids for the construction of said guide levees and unless restrained bids will be received and contracts let therefor in due course.

It is also further alleged as follows:

"That the acts of the defendants in setting apart this property as a floodway and diversion channel and in advertising for and receiving bids for the doing of the proposed work, to-wit, the construction of the guide levees and the contemplated acts of the defendants in the awarding of contracts therefor, has already had the effect of casting a cloud upon the title of complainant to his said lands and properties and have materially affected his use and enjoyment of same, and have materially affected and impaired the value thereof. That, the result of setting apart this area as a floodway or diversion channel and the publication by defendants of said
12 advertisements for bids for the construction of the guide levees, this property has not only deteriorated in value but complainant's title to same has been seriously clouded, the use of same has been seriously affected, and complainant would be unable to borrow money on said lands, sell or dispose of same, or interest persons in operating said lands for farms or for any other purpose owing to the fact that the Government has indicated that it has taken possession or intends to take immediate possession of this property for a diversion channel or a floodway. That, as a result of making this area, in which complainant's lands and those of others are situated, a floodway or diversion channel, these lands will be rendered unfit for agricultural or any other purpose. That the title to complainant's lands is seriously clouded by said acts, and his ability to use said properties or obtain credit thereon is seriously affected, and, as stated above, this property is well worth the sum of $9,000.00.

"Complainant would further state that, although the flood control act of May 15, 1928, sec. 4, above recited, and the Constitution of the United States, fifth amendment, which provides:

"' * * * nor shall any person * * * be deprived of life, liberty, or property without due process of law, nor shall private property be taken for public use without just compensation,' require the United States Government to justly compensate complainant for his property taken, damaged, or destroyed, the defendants herein are not complying in any way either with the constitutional provision or with the provision of sec. 4 of the flood control act. Without having obtained complainant's property, without having commenced any condemnation proceeding, they are proceeding to take over property in this area, enclose same with levees, and designedly overflow same during floodwater. That no condemnation proceeding has been commenced against complainant for this property, no compensation has been paid him or offered him, but the said agents of the United States Government are seeking to award contracts for the immediate construction of the guide levees and to make a diversion or floodway channel in this area.

"That the damage to this complainant will be irreparable; that it is a well-known fact that any suit against the United States to recover money for damages or property is subject to interminable delays and is very expensive. Complainant would further state that if said contracts for the guide levees are awarded before complainant has been compensated for his property or secured in the payment of compensation for same, the contracts would involve such large sums that complainant would be unable to give bond sufficient to enjoin same and thus protect his property from confiscation by reason of the proposed unlawful acts of the defendants. That complainant has no remedy at law and if said contracts are awarded he will immediately suffer irreparable injury and loss.

Complainant would further state that under section 4 of the flood control act of May 15, 1928, it is provided that the Secretary of War may cause proceedings to be instituted for the acquirement by condemnation of any lands, easements, or rights of way which, in the opinion of the Secretary of War and the Chief of Engineers, are needed in carrying out this project. The Secretary of War and the Chief of Engineers have already agreed and notoriously
13 announced that property in the Boeuf floodway or area is necessary to carry out the project. The said section 4 provides that 'when the owner of any land, easement, or right of way shall fix a price for the same which, in the opinion of the Secretary of War is reasonable, he may purchase the same at such price.' Complainant has never fixed a price upon his land, nor donated or conveyed same to the Government, nor has the Secretary of War tendered to him any price for same, nor has any condemnation proceeding been commenced to acquire same.

"The said act further provides, in section 4, that if condemnation proceedings are commenced to obtain properties which, in the opinion of the Secretary of War and the Chief of Engineers, are needed to carry out the project, the proceedings will be under the provisions

of section 5 and 6 of the river and harbor act of July 18, 1918. Section 5 of that act expressly provides that before the United States can acquire possession of property it shall first file its petition for condemnation, after which it shall have said lands and proceeds with the public works thereon only on the following conditions: 'That certain and adequate provision shall have been made for the payment of just compensation to the party or parties entitled thereto, either by previous appropriation by the United States or by the deposit of moneys or other form of security in such amount and form as shall be approved by the court in which such proceeding shall be instituted.'

"The defendants herein are undertaking to take possession of complainant's property without first filing a condemnation suit or without first purchasing same from him. That the construction of the guide levees will, in effect, be taking possession of complainant's property by the United States Government without just compensation to complainant."

Plaintiff prays that the defendants be enjoined from carrying out any of the work of the said Boeuf River floodway, and pending hearing that a restraining order issue prohibiting them from awarding contracts or building said levees and for general relief.

The restraining order was denied, but in view of the importance of the case, counsel for the Government were called in and informed of the presenting of the petition. It was suggested that the defendants prepare to meet the issues promptly so that the courts might make a conclusive decision of the questions involved with as little delay as possible. Thirty days were allowed for this purpose, and the time was extended for an additional week at the request of counsel for the defendants.

On the day of the hearing the defendants filed a motion to dismiss upon the following grounds:

"1. That this court is without jurisdiction.

"2. That the United States is a sovereign power and can not be sued without its consent.

"3. That a suit against the other defendants is in effect a suit against the United States and that an official of the Government of the United States can not be sued when there is no personal judgment sought against him and he has no personal interest in the matter involved.

14 "4. That the court has no jurisdiction under the bill of complaint.

"5. That there is a misjoinder of parties defendant herein.

"6. That it appears from the bill of complaint, with the exception of the United States, that the respondents therein named are not acting in a personal or individual capacity, or engaged in the performance of any act or acts other than those prescribed by the laws of the United States, and all of their acts are official and as the representatives of the United States.

"7. That the complainant is not entitled to relief in equity inasmuch as he has a plain, adequate, and complete remedy at law.

"8. In the alternative, and only in the alternative, should the court overrule this motion to dismiss for all of the above and foregoing reasons, then and in that event respondents show that the said bill of complaint discloses no cause of action or no right of action."

In reality there are only four points raised: (1) Grounds 1, 2, 3, 4, and 6 set up the want of jurisdiction because it is claimed the case is one against the Government which has not given its consent to be sued; (2) No. 5 is a plea of misjoinder of parties defendant; (3) No. 7 asserts that the bill discloses no ground for equitable relief, for petitioner has an adequate remedy at law; (4) while specification No. 8 is a plea of no cause or right of action.

It will be noted that the motion does not challenge the venue of this court, upon the ground that the defendants are not domiciled within its territorial limits, and the general appearance made amounts to a waiver of that question. Lee vs. Chesapeake & Ohio, 260 U. S., 565.

Counsel for petitioner rely upon paragraph 20 of section 24 of the Judicial Code (U. S. C. C.) as authorizing the making of the United States a party to this suit. The theory advanced is that since the Government has the right to condemn plaintiff's property for the purpose for which it is to be used, its course amounts to a taking under the 5th amendment, entitling him to claim compensation as upon an implied contract, of which this court has jurisdiction concurrent with the Court of Claims for sums not exceeding $10,000. However, the plaintiff asks for no such relief, which would be in the nature of a suit at law, but has appealed to the equity side of this court for an injunction, upon the ground that his property is to be taken contrary to the Constitution as well as the particular statute under which the work is proceeding. It is well to note that the plaintiff does not assert, and in argument expressly denies that he intends to question the constitutionality of the flood control act. I construe his position as asserting that the defendants are proceeding in the face of both the statute and the Constitution. In this situation I do no think the Government, as such, can be or need be a party defendant. One test would be to answer the query as to whether it might in this identical proceeding, if it saw fit, file a cross bill for condemning the property. It seems clear that it must be answered in the negative, for such an action would be necessarily controlled by the statutory provision for exercising the powers of eminent domain and could not be classed as a proceeding in equity. Of course, the motion, for its own purposes, admits the allegation of ownership of the property in plaintiff, and there is, therefore, no issue of title to be determined against the United States, which would make it a necessary party within the purview of decisions cited by
15 counsel for defendants, such as United States vs. Clarke, 8 Peters 436; Hill vs. U. S., 149 U. S. 593; Morrison vs. Work,

266 U. S. 481. This bill also necessarily admits the power of the Government to take the property or the rights thereon, which the project contemplates using as part of the floodway. The only effect of this suit is to restrain the officers charged with the execution of the works, which he alleges will consign his property to that use, until they have complied with what the plaintiff contends is the required procedure under the statute. Hence, I think it may be classed as in the nature of a proceeding in ejectment or to restrain a trespass against the Mississippi River Commission and the individual officers named as defendants. See Belknap vs. Schild, 161 U. S. 18; American School of Magnetic Healing vs. McAnnulty, 187 U. S. 94; Santa Fe Pac. R. R. Co. vs. Lane, 244 U. S. 492; Waite vs. Macy, 246 U. S. 606; Hammer vs. Dagenhart, 247 U. S. 251; First National Bank of Canton vs. Williams, 252 U. S. 504; Fort Smith & Western Railroad Company vs. Mills, 253 U. S. 206; Street vs. Lincoln Safe Deposit Company, 254 U. S. 88; Tedrow vs. Lewis & Son Dry Goods Company, 255 U. S. 98; Kennington vs. Palmer, 255 U. S. 100; Kinnance vs. Detroit Creamery Co., 255 U. S. 102; Weed & Co. vs. Lockwood, 255 U. S. 104; Willard & Co. vs. Palmer, 255 U. S. 106; International R. Co. vs. Davidson, 257 U. S. 506; Hill vs. Wallace, 259 U. S. 44; Lipke vs. Lederer, 259 U. S. 557; Regal Drug Co. vs. Wardell, 260 U. S. 386; Chastleton vs. Sinclair, 264 U. S. 543. Plaintiff in substance charges that the conduct of these defendants has cast a cloud upon the title to his property which has and will deprive him of its value without due process and contrary to the fifth amendment. Under such circumstances the authorities abundantly support the right to make them parties defendant to such a suit as this. Noble vs. Union River Logging R. R. Co., 147 U. S. 165; Lane vs. Watts, 234 U. S. 525; Payne vs. Central Pac. Ry. Co., 255 U. S. 228; Payne vs. New Mexico, 255 U. S. 367; Santa Fe Pac. R. R. Co. vs. Fall, 259 U. S. 197; Baldwin Co. vs. Robertson, 265 U. S. 169.

My conclusion is, therefore, that the Government should be dismissed from the suit.

This disposes of the question of jurisdiction as well as the plea of misjoinder, which consists of the assertion that the suit is one against the Government and that the officers are without interest and hence improperly joined.

We next take up the remaining specifications—want of equity and no cause or right of action.

I shall dispose of the latter question first. At this point it is well to say that in the opening argument counsel for the defendants discussed and appeared to rely mainly upon the proposition that the Government has the right to impose the burden complained of upon the property of plaintiff as a matter of sovereign power, and that injury, if any, is so remote and consequential as to fall within the class damnum absque injuria. On the other hand, counsel for the plaintiff undertook to discuss the merits of the case as presented by the petition of whether the project amounted to a taking

property within the meaning of the fifth amendment. The
16 court suggested that in the event it should decide the other points hereinabove considered, as well as the one of want of equity, were not well taken, it would not care to dispose of the important question of what constituted property or amounted to a taking within the meaning of the law, except after a full hearing of the facts, one reason among others being that if it should err the result would be to have the case sent back after the delays incident to an appeal and thus unnecessarily impede the doing of the work. In other words, it was important that both the Government and property owners should know what their rights were at the earliest possible moment consistent with proper judicial consideration.

From earliest times man has attempted to cultivate the rich soils in the valleys and on the banks of watercourses. From this struggle with the elements the rule evolved that everyone has the right to protect his property with dikes or levees to keep back such waters, without being responsible to his neighbors or to owners on the other side of the stream. It was recognized that they have the equal right to protect themselves by similar means. (See discussion and citation of authorities by Judge White, in Cubbins vs. Mississippi River Commission, 241 U. S. 363-4.) On the other hand, there grew with the doctrine another of equal force, that "the free flow of water in rivers was secured from undue interruption, and the respective riparian proprietors, in consequence of their right to enjoy the same, were protected from undue interference or burden created by obstructions to the flow, by deflections in its course, or any other act limiting the right to enjoy the flow or causing additional burdens by changing it." The court reviewed the law, including the commentators upon the Code Napoleon, and quoted the maxim of the Roman law, "Fluminis naturalem cursum non avertere." (L. Cod. de Alluvionibus.)

It follows that if the private individual who constructs a levee for the protection of his own property so long as he does not interfere with the natural flow of the stream is not liable to others for the effects thereof; neither is the Government, the State, levee boards, or other similar agencies who contribute to or assume control of such works for the benefit of the public. See Jackson vs. U. S., 230 U. S., p. 1; Hughes vs. U. S., ib. p. 24. It is well settled that Congress, under the commerce clause of the Constitution, has the right to authorize construction of improvements upon and in the navigable streams and watercourses of the country in aid of navigation, so long as it is done without impeding or diverting the flow from the natural channel without liability for consequential damages or injuries to private property. Bedford vs. U. S. 192 U. S. 217.

For a description in general terms of the situation now to be dealt with, no better statement could be made than that of Justice White in Jackson vs. U. S., 230 U. S., page 1, from which I quote at page 8 as follows:

"The valley of the Mississippi River may in a broad sense be said to commence at Cape Girardeau, Missouri, and to extend from there to the mouth of the river at the Gulf of Mexico. The river, however, in its course to the ocean does not run through the center of the vast fertile and alluvial plains which in a comprehensive and generic sense constitute the Delta of the Mississippi. On the contrary, the situation of the river in this respect varies, occasioned by the fact that at divers places the upland or hill country approaches to or constitutes the bank of the river. The difference in this regard is marked between the west and east banks. The west bank is divided into four great basins—the St. Francis Basin, which extends from Cape Girardeau to Helena; the White River Basin, which extends from Helena to the mouth of the Arkansas; the Tensas Basin, which extends from the mouth of the Arkansas to the mouth of the Red River; and the Atchafalaya Basin, extending from the mouth of the Red River to the Gulf. Practically in the long sweep from Helena, where St. Francis Basin ends and the White River Basin begins, to the ending of the Atchafalaya Basin at the Gulf there is no real topographical distinction between the basins, the west bank of the river in that great distance consisting of alluvial country, having generally a very wide though varying expanse. The division into basins, putting out of view the St. Francis Basin, is therefore merely the result of a consideration of the watershed of each basin, all the water, however, from each ultimately finding its way to the Gulf of Mexico, either through the Mississippi River or in the lower basins in part at least by the means of streams flowing independently of the Mississippi River to the Gulf of Mexico. On the east bank the situation is different. In the long stretch from Cairo, Illinois, to a point a short distance below Memphis, generally speaking, the hills and uplands border the river and constitute its bank. From the point below Memphis to which we have referred to Vicksburg, Mississippi, this is not the case, and there is a great basin known as the Yazoo Basin, which, aside from peculiarities of its own, may be said to possess the same general characteristics as the basins on the west bank of the river. From Vicksburg, where the uplands come to the river and constitute its bank, down to Baton Rouge, Louisiana, where the hills or uplands permanently recede from the river, a different condition from that which exists on the west bank obtains."

By the act of June 2, 1879 (21 Stat., p. 37), the Mississippi River Commission was created and empowered to direct and complete such surveys of the Mississippi between the head of the Passes near its mouth to its headwaters, as was then in progress, and to make such additional "surveys, examinations, and investigations, topographical, hydrographical, and hydrometrical of said river and its tributaries as may be deemed necessary by said commission to carry out the objects of said act." It was further required to make report to Congress of any "such plan or plans as will correct, permanently im-

and deepen the channel and protect the banks of the Mississippi river; improve and give safety to the navigation thereof; prevent destructive floods; permit and facilitate commerce, trade, and the postal service, provided that the commission shall report in full upon the practicability, feasibility, and probable cost of the various plans known as the jetty system, levee system, and the outlet system, as well as upon such others as they may deem necessary." For the purposes mentioned an appropriation of $175,000 was made. Three years later, in 1882, the great overflow of that year, with considerable damage to the alluvial valley, occurred, and on March 1st Congress made an appropriation of $150,000 to furnish food for the destitute population. 22 Stat. 379. In August, 1882, in the rivers and harbors bill of that year there was appropriated $4,000,000, to be expended from the head of the Passes to Cairo, but it was expressly stipulated that "no portion of this appropriation shall be expended to repair or build levees for the purpose of reclaiming lands or preventing injury to lands by overflows: Provided, however, That the commission is authorized to repair and build levees, if in their judgment it should be done, as a part of their plan to afford ease and safety to the navigation and commerce of the river and to deepen the channel." 22 Stat. 208. Thereafter provision was made from time to time to aid and assist the valley States and their subordinate agencies in the construction of levees. Many held to the theory that this would have the effect of increasing the flow, deepen the channel, and give more room for the outlet of flood waters according to the method used by Capt. Eads, who constructed the jetties at the mouth of the river. In the suit of Cubbins vs. Mississippi River Commission, supra, the petitioner in that case, who also demanded compensation for alleged injuries to property from the waters of the Mississippi, assailed the "Eads plan" in somewhat similar fashion to what we have heard of the more recent one. It will be noted that at the time Congress sought to make plain, at least in the beginning of the activities of the commission, that its purpose was to aid commerce, the postal service, etc., by the improvement of navigation, but expressly declared that the funds appropriated should not be used to reclaim lands or prevent injury by floods. This, then, appeared to be the definite policy of the Government. I have not the time or space to trace subsequent legislation to determine whether the change of policy came about gradually or not, but forty-five years later occurred the great flood of 1927, which in size, destruction of property (officially estimated at over $200,000,000), and loss of human life (also stated to have been more than two hundred persons) outstripped anything that had gone before. As a result pressure was put upon Congress, through Representatives and Senators, not only of the States immediately contiguous to the Mississippi, but in others including those along its tributaries, to provide relief, because it so happened that in that year all of those streams, such as the Ohio,

Missouri, Tennessee, Arkansas, White, and Red, were full to overflowing at approximately the same time. Finally, after a survey and report by the Chief of Engineers, which was printed as House Document No. 90, the act of May 15, 1928, was passed. That report of project also consisted of a review, from an engineering standpoint, of a number of plans for controlling the waters of the Mississippi River proper, or the volume to be dealt with under flood conditions from Cape Girardeau, Missouri, at the northern end of the valley, to the Gulf of Mexico. The Chief of Engineers recommended that all others, such as storage basins, controlled spillways, etc., be discarded, and that a definite plan, based upon the use of the three main basins, referred to as the northern or St. Francis Basin on the west, the middle, including the Yazoo Basin on the east and the
19 Tensas Basin on the west, and the southern or Louisiana section, known as the Atchafalaya Basin, be adopted. In transmitting this report, the Chief of Engineers said:

2. The plan is a comprehensive one, providing for the maximum flood predicted as possible and for future expansion to meet changing conditions. It includes a spillway above New Orleans, diversion floodways in the Atchafalaya and Tensas Basins, a river-bank floodway from Cairo, Illinois, to New Madrid, Missouri, together with strengthening and a moderate raising of existing levees. It is designed to prevent any material increase in flood stages. Channel stabilization and navigation improvement are included. Exclusive of rights of way, incidental drainage works, and damages, if any, recommended to be borne by local authorities, the estimated cost of flood-control works is $185,400,000, and of channel stabilization and mapping $111,000,000, a total of $296,400,000. The distribution of cost must be determined by law. The suggestion is made that a distribution by which the cost of flood-control works in general is borne 80% by the Federal Government and 20% by the valley States and the entire cost of channel stabilization is borne by the United States would accord with the fiscal policy of the President and precedents established by Congress. The reorganization of the Mississippi River Commission, Federal control over structures within natural floodways, and the comprehensive mapping of the alluvial valley are also recommended. Flood control of tributaries will be reported upon after the completion of surveys already authorized by Congress.

"3. The control of Mississippi floods by reservoirs is shown to be too costly to warrant their construction. Their development for local benefits is discussed. Other suggested schemes, including levees of sufficient height to contain the maximum possible flood, are discussed but found inadvisable.

"The recommended plan fundamentally differs from the present project in that it limits the amount of flood water carried in the main river to its safe capacity and sends the surplus water through lateral floodways. Its essential features and their functions are:

"Floodways from Cairo to New Madrid, from the Arkansas River through the Tensas Basin in the Red River, and from the Red

through the Atchafalaya Basin to the Gulf of Mexico. These will relieve the main channel of the water it can not carry and lower the floods to stages at which the levees can carry them.

"A controlled spillway to hold the levels down to safe stages at and near New Orleans.

"Local setting back of the levees in the main river at bottle necks to increase its carrying and reduce its flood heights.

"Great protection against crevasses by strengthening the levee by reducing flood heights through the increased widths of channel afforded by floodways, spillways, and setbacks and by moderately raising the levees where needed to meet predicted flood stages.

"The progressive revetment of caving banks to protect the foundation of the levees and to stabilize the river both for flood control and navigation.

20 "Improved navigation channels for river traffic not less than 300 feet wide and 9 feet deep, to be obtained by dredging and training works where necessary between Cairo and New Orleans.

"4. The estimated construction cost of the complete plan is $296,400,000, and it can be advantageously executed in approximately ten years.

"5. The project recommended gives the maximum of results for the minimum of cost. It recognizes the interests and protects the rights of those who will be chiefly benefited and of the taxpayers who furnish the funds. Complete flood control embodying the cheapest practicable reservoir system would be much more expansive.

"6. The plan heretofore pursued has been the construction of levees high enough and strong enough to confine all of the flood waters within the river channels. The levees that have been constructed are not sufficiently high for such floods as are now predicted. The cost of raising and strengthening them sufficiently to carry extreme floods would greatly exceed the cost of the plan proposed. Furthermore, the extent of the disaster which follows a crevasse increases greatly as the flood is forced to higher states by confinement wholly within the levee system. The loss of life and property in the recent great flood in the alluvial valley followed the breaking of the levees which reclaimed the land for the use of man. This reclamation had been pushed so far that insufficient room was left in the river for the passage of the unprecedented volume of flood water. The levees must be strengthened, but a halt must be called on further material increase in their heights and the consequent threat to the inhabitants of the areas they are built to protect.

"7. Man must not try to restrict the Mississippi River too much in extreme floods. The river will break any plan which does this It must have the room it needs, and to accord with its nature must have the extra room laterally. In its original state the river had only one low water channel until it reached the flat land near the Gulf, but in flood it overflowed an area 50 miles wide, which is really its natural flood bed. The water which can not be carried in the

main channel with the levee at reasonable height must be diverted and carried laterally. Some additional capacity can be obtained in the main river by local setbacks of the levees. As a general setback is not practicable, the remainder must be supplied by floodways paralleling the general course of the river.

"8. The plan recommended provides the requisite space for the passage of floods, and levees of adequate strength to withstand them, so that should a flood recur of the magnitude of the flood just experienced, the maximum of record, it would be passed out to the Gulf without danger to life in the alluvial valley and without damage to property except in the floodways allotted for its passage. Controlling side levees limit the area of the floodways and protect land not in the floodways where such protection justified its cost.

"9. Should Divine Providence ever send a flood of the maximum predicted by meteorological and flood experts as a remote possibility but not beyond the bounds of ultimate possibility, the floodways provided in the plan are still normally adequate for its passage without having its predicted heights exceed those of the
21 strengthened levees. It is designed to be both simple and comprehensive, flexible and adequate to prevent a calamity such as that of 1927 from happening again as a result of any flood past or predicted. It is capable of modification or expansion, if desirable, to further accommodate an increasing population and its property."

This plan or project was adopted by Congress in the flood control act, subject to revision by a commission to be appointed by the President, which was authorized to consider the "engineering difference between the adopted project and the plan recommended by the Mississippi River Commission in its special report, adopted Nov. 28, 1927, * * * and to recommend to the President such action as it may deem necessary to be taken in respect to such engineering differences, and the decision of the President upon all recommendations or questions submitted to him by such board shall be followed in carrying out the project herein adopted. The board shall not have any power or authority in respect to such project except as hereinbefore provided. Such project and the changes therein, if any, shall be executed in accordance with the provisions of section 8 of this act. Such surveys shall be made between Baton Rouge, Louisiana, and Cape Girardeau, Missouri, as the board may deem necessary to enable it to ascertain and determine the best method of securing flood relief and in addition to levees, before any flood-control works other than levees and revetments are undertaken on that portion of the river: Provided, That all diversion works and outlets constructed under the provisions of this act shall be built in a manner and of a character which will fully and amply protect the adjacent lands: Provided, further, That, pending completion of any floodway, spillway, or diversion channel, the areas within the same shall be given the same degree of protection as is afforded by levees on the west side of the river contiguous to the levee at the head of said floodway, but nothing herein shall prevent, postpone, delay,

or in any wise interfere with the execution of that part of the project on the east side of the river, including raising, strengthening, and enlarging the levees on the east side of the river."

Three hundred and twenty-five million dollars were authorized to be appropriated instead of $296,400,000.00, recommended by the Chief of Engineers.

In section 2 of the act, Congress, instead of adopting the suggestion of having the States contribute twenty pre cent of the cost of the work, estimated that they had already spent $292,000,000.00 for like purposes, and declared this to be a "full compliance" with the principle of local contribution and that "no local contribution to the project herein adopted is required."

In section 3 it was further provided that no money should be spent under the act "until the States or levee districts have given assurance satisfactory to the Secretary of War that they will maintain all flood control works after their completion, except controlling and regulating spillway structures, including special relief levees; maintenance includes normally such matters as cutting grass, removal of weeds, local drainage, and local repairs to main levees; (a) agrees to accept land turned over to them under the provisions of sec. 4; (c) provides that without cost to the United States all

22 rights of way for levee foundations and levees on the main stem of the Mississippi River between Cape Girardeau, Missouri, and the head of the passes." (Underscoring by the author of this opinion.) This section further provides:

"No liability of any kind shall attach to or rest upon the United States for any damage from or by floods or flood waters at any place: Provided, however, That if in carrying out the purposes of this act it shall be found that upon any stretch of the banks of the Mississippi River it is impracticable to construct levees, either because such construction is not economically justified or because such construction would unreasonably restrict the flood channel, and lands in such stretch of the river are subjected to overflow and damage which are not now overflowed or damaged by reason of the construction of levees on the opposite banks of the river, it shall be the duty of the Secretary of War and the Chief of Engineers to institute proceedings on behalf of the United States Government to acquire either the absolute ownership of the lands so subjected to overflow and damage or floodage rights over such lands."

I quote in full section 4:

"The United States shall provide flowage rights for additional destructive flood waters that will pass by reason of diversions from the main channel of the Mississippi River: Provided, That in all cases where the execution of the flood-control plan herein adopted results in benefits to property such benefits shall be taken into consideration by way of reducing the amount of compensation to be paid."

The Secretary of War may cause proceedings to be instituted for the acquirement by condemnation of any lands, easements, or rights of way which, in the opinion of the Secretary of War and Chief of Engineers are needed in carrying out this project, the said proceedings to be instituted in the United States district court for the district in which the land, easement, or right of way is located. In all such proceedings the court, for the purpose of ascertaining the value of the property and assessing the compensation to be paid, shall appoint three commissioners, whose award, when confirmed by the court, shall be final. When the owner of any land, easement or right of way shall fix a price for the same which, in the opinion of the Secretary of War, is reasonable, he may purchase the same at such price; and the Secretary of War is also authorized to accept donations of lands, easements, and rights of way required for this project. The provisions of sections 5 and 6 of the river and harbor act of July 18, 1918, are hereby made applicable to the acquisition of lands, easements, or rights of way needed for works of flood control: Provided, That any land acquired under the provisions of this section shall be turned over without cost to the ownership of States or local interests." (Underscoring by the author of this opinion.)

I also quote that portion of section 8 which is deemed pertinent:

"The project herein authorized shall be prosecuted by the Mississippi River Commission under the direction of the Secretary of War and supervision of the Chief of Engineers and subject to the provisions of this act. It shall perform such functions and through such agencies as they shall designate after consultation and discussion with the president of the commission. For all other purposes
23 the existing laws governing the constitution and activities of the commission shall remain unchanged. The commission shall make inspection trips of such frequency and duration as will enable it to acquire first-hand information as to conditions and problems germane to the matter of flood control within the area of its jurisdiction; and on such trips of inspection ample opportunity for hearings and suggestions shall be afforded persons affected by or interested in such problems."

It will be observed that the policy of Congress in the late 70's and early 80's when the Mississippi River Commission was created and began to function, and during which many of the cases cited and relied upon by the Government arose, was entirely different to that disclosed by the act of 1928. As above stated, at that time the purpose was to aid commerce, benefit the postal service, etc., by improving navigation under the grant of power found in section 8 of Article I of the Federal Constitution, with a distinct declaration that money should not be expended for reclamation or preventing floods; whereas, in its latest action, the very bill itself is entitled: "An act for control of floods on the Mississippi River and its tributaries and for other purposes." It could no longer withstand the demand for protection to the enormous property values and popula-

tion of the valley or decline to assist in retaining the lands which had been "reclaimed" from the original "natural bed" of the river, which, the Chief of Engineers says, in its primal state, had a width of some fifty miles. It is scarcely to be expected that anyone will ever question the constitutionality of this expansion of purpose—certainly not those States and persons who are to benefit by protection from the destructive forces of the great river.

I do not deem it necessary to discuss at length cases construing the police powers, as distinguished from those of eminent domain, for Congress appears, by the provisions of this statute, to have recognized that in benefiting and protecting some of the citizens it had to do so at the expense of others, for the simple reason that all could not be included. Strictly speaking, the Federal Government has no police power, although in carrying out some of its delegated authority, such as the control of navigation, it exercises powers analogous to the police powers of the State. C. J., vol. 12, 910, verbo, "Constitutional Law," sec. 417. It is true that the second paragraph of section 3 declares that "no liability of any kind shall attach to or rest upon the United States for any damages from or by floods or flood waters at any place * * *," but it adds a proviso, directing the payment for such injuries to property as the Government could not have been held liable for under decisions like that of Gibson vs. U. S., 166 U. S. 269, and Bedford vs. U. S., 192, 217. And immediately follows sections 4, above quoted.

This latter section seems to contemplate that the rights thus to be "furnished" shall be paid for, as in the very next paragraph the machinery and procedure for acquiring by condemnation, such as "in the opinion of the Secretary of War and the Chief of Engineers, are needed in carrying out this project * * *" is established.

The statute does not make clear what is meant by "flowage rights for additional destructive flood waters that will pass by reason of diversion from the main channel of the river." However, heretofore it has been the object of the Government, as well as of the States and subsidiary agencies, at all times, to keep the waters of the river in its main channel. It was only on occasions when this could not be done that they broke through and flooded property situated like that of the plaintiff. The Chief of Engineers and the War Department seem to construe the provisions of section four as applying only to conditions like those in the New Madrid area, where existing levees are to be lowered and used as a secondary "defense," while the higher or protecting embankments are placed further back. They contend, as I understand it, that in the Tensas or Boeuf River Basin as well as the Atchafalaya, because existing levees will not be altered, and these areas will not be flooded until the waters of the main river reach a height where it would happen anyway under conditions existing when the act was passed, no protection is being taken away from property there; hence no additional water will be diverted. This, however, leaves out two considera-

24

tions which Congress may have had in mind; first, that these areas were being deprived of such measure of safety as had been enjoyed by the possibility that the levees might break in some other locality, either as a result of their greater vigilance or a fortuitous event, thereby permitting them to escape; and, secondly, when the fuse plugs do go out they will doubtless be washed out to the level of the surrounding land or deeper, and this property will be required to bear the burden, not only of its own share of the overflow waters, but, in addition, all of that which would otherwise cover the protected areas.

Is the construction of the Chief of Engineers the reasonable common-sense meaning of the language of the act, or is it more reasonable to assume that Congress viewed the adopted project as a departure from the previous method, of trying to keep all of the water in the main channel, and as in effect the dedication of these floodways to the duty of performing the service which the constantly rising levees had done in the past.

Congress, in a general way, at least as to engineering features, purported to adopt the project of the Chief of Engineers, but, as above pointed out, disregarded some of his recommendations as to the bearing of the expense, etc. However, the comparatively slight increase in the appropriation from $296,400,000 to $325,000,000 would appear to be inadequate to cover the cost if persons situated like the plaintiff are to be paid and they have or may suffer injury to their property proportionate to what he claims. One can not help but be impressed that the act as finally passed was an unskillful compromise, first, between those claiming that the State should bear a portion of the burden as against others insisting that the Government pay the whole cost; and, secondly, those demanding that all injury suffered by property owners in the floodways should be compensated, while others contended that the Government should not be made responsible for anything except property actually taken and to be occupied by the levees and other work contemplated by the project. It is a matter of common knowledge that action by Congress was delayed for some time as a result of disagreement and discussion with the President upon some of the points. However, it can not be denied that in so far as there will be a diversion of the waters of the main channel of the river and a directing of their course to the sea through these limited floodways or channels, property owners situated therein are called upon to suffer whatever losses may be entailed for the good of those whose protection is contemplated under the plan; and while the Government may, for the purposes of commerce and navigation, construct levees and other works or improvement upon the banks and in the channel of streams without liability to those who may suffer consequential damage, yet if the work in contemplation in this instance is not for such ends, but mainly for the benefit of other private property, then does there not arise in bar of that course the inhibition of the Constitu-

tion that private property shall not be taken for public purposes without just compensation? The allegation that the War Department has not paid and does not intend to pay for the injuries claimed by plaintiff is, of course, admitted by the motion to dismiss. If the plaintiff's property and that of others similarly situated will be compelled to bear the burden of additional flood waters, and the defendants are proceeding in disregard of such rights and the method for acquiring them laid down by the act, then clearly they are ignoring the statute and under well-settled principles can be stopped by a court of equity until they comply with the law. Corpus Juris, vol. 20, pp. 838–9, verbo "Eminent Domain," and authorities cited in the footnote.

"Failure to institute proper proceedings. An owner may obtain an injunction to restrain the taking or injury of his property, although such taking or injury is for a public purpose by one possessing the power of eminent domain, where such taking or injury is sought to be accomplished without the institution of condemnation proceedings." Ib. 1173, sec. 533 e. and authorities in footnote.

If the rights sought to be used are within the protection of the statute, the latter lays down the means for obtaining them and fixes the time when the Government shall be authorized to go into possession—that is, after filing a suit for condemnation and providing funds or securities to pay the owner, as directed by the court. The statutory method excludes all others except of course amicable settlement with the owners. However, this does not prevent entry for the purposes of examination and survey. C. J. vol. 20, p. 839.

The report of the Chief of Engineers states, speaking of the Mississippi, that "its alluvial valley has a growing population and contains the largest area of the richest land in the United States," (par. 46). He also calculates that, "in the absence of protecting works," 30,000 square miles of the valley would be flooded in high water, but with the construction of the proposed system of levees and floodways approximately 20,550 square miles "will be protected annually. The remaining 9,450 square miles, of which approximately 3,340 square miles is cleared land, will be protected on an average of two years in three and fourteen years in fifteen, depending upon its location. The remaining 6,110 square miles is swamp and timbered land, which is not injured by the flood." (Par. 23.) He also states that the estimated cost of $296,400,000 does not "include the costs of rights of way nor possible damage to structures which have invaded the flood bed of the river." (Par. 24.)

After calculating or estimating the period during which the land in the floodway will be overflowed, and pointing out the op-
26 portunities which will remain for cultivation, he says (speaking of the necessity for the use of lands situated like those of plaintiff):

"Any other use made of these areas must be subject to the higher use for the general control of the river. No curtailment of their

(the floodways) area should be permitted which will run contrary to the protection of life in the large cities and the uninterrupted cultivation of the great areas that will be permanently protected by the plan."

This, of course, demonstrates the certainty that at some time the property within the floodway will be overflowed by the surplus waters of the Mississippi River, and the owner's use and occupancy is subordinated to that purpose. When or how often no one save Providence can tell. It is true that, based upon past experience, the Chief of Engineers estimates that it will not occur oftener than above indicated, depending upon the location of the property, but necessarily these figures are at best estimates or prophesies. Would anyone under such circumstances feel justified in placing improvements thereon of a valuable or permanent character when he knew that at some time, by express design and inescapably, they would be destroyed by the great volume of water that is to be directed through these channels? Some of the property owners, like plaintiff, no doubt are small farmers, and it would be quite a hardship if they were compelled to acquire other property outside the floodway—in some cases five to ten miles away—upon which to build their homes, farm buildings, etc., necessary to the cultivation of their lands within the floodway. The "maximum possible" estimate of the Weather Bureau and the "maximum probable" estimate of the Mississippi River Commission of the volume of water that will pass down the valley at Arkansas City, as well as at the mouth of Red River, is fixed at approximately three million second-feet. It is proposed under such conditions to divert through the Tensas or Boeuf River Basin something less than one million second-feet, or about one-third, practically all of which will again return to be dealt with at the head of the Atchafalaya. From the latter point the plan contemplates that all in excess of 1,500,000 second-feet, or approximately one-half of the total, will be then turned down the Atchafalaya Basin. Thus appears the menace under which anyone would labor who attempted to live in and cultivate the beds of these floodways. The Chief of Engineers is probably correct when he states that sufficient warning could be given to enable them to flee and save the lives of themselves and their livestock; but what would become of their crops and improvements, and what condition would their property be left after the water had gone down?

In their supplemental brief counsel for the Government laid much stress upon decisions of the State court to the effect that the State, prior to the constitution of 1921, was not required to pay for property taken for levee purposes. But, as pointed out in Eldridge vs. Tresvant, 160 U. S. 452, this was because of the servitude imposed by the civil law upon the property of a riparian owner, compelling him to contribute, without compensation, space for levees and public highways. They can have no bearing on a situation like this, where the structures are in some places fifty miles inland and intended to provide a floodway for waters diverted from the main channel in the

State of Arkansas. Besides, it is alleged that these works are
27 designed to hold the water upon plaintiff's property and not for its protection.

It is also contended that the Government may avail itself of all the powers of eminent domain of the State, but in Kohl vs. United States, 91 U. S. 274, it was said:

"If the United States has the power (of eminent domain) it must be complete in itself. It can neither be enlarged or diminished by the State. Nor can any State prescribe the manner in which it must be exercised."

I have, of course, gone somewhat into the merits of the case, but only so far as seemed necessary in passing upon the exception of no cause of action and to more clearly illustrate the view I entertain that its very nature takes it without the class which is controlled by the maxim "damnum absque injuria." In doing so I have attempt to confine my discussion to the allegations of the petition, the report of the Chief of Engineers as representing the express purpose of his department upon the questions involved, and such other well-known facts and conditions as any court might notice judicially.

My conclusion is that the petition does allege a cause and right of action, as well as grounds for the intervention of a court of equity, if they can be supported by proper proof upon the trial. For the reasons assigned the motion to dismiss will be overruled.

Done and signed at Monroe, Louisiana, on this the 13th day of August, A. D. 1929.

BEN C. DAWKINS, *U. S. D. J.*

[File endorsement omitted.]

In United States District Court

[Title omitted.]

Answer

Filed September 19, 1929

Now come the respondents, made defendants in the above numbered and entitled cause, and for answer to the bill of complaint and return on the rule to show cause, respectfully say:

I

That the respondents expressly reserve all of their rights under the motion to dismiss, previously filed herein, argued, submitted, and overruled by the court, and respectfully except to the court's ruling herein.

28 II

Your respondents, without admitting that this court has jurisdiction, but expressly excepting to the same and to the ruling of the court, upon the grounds set forth in the motion to dismiss, and for the reasons and because of the authorities submitted and cited in

both oral and written argument, and only because their said motion to dismiss has been overruled by your honor, they now, in compliance with the court's ruling, reserving the benefit of their exceptions and the grounds for dismissal raised in the motion to dismiss, and without waiving the same but insisting thereon, beg leave to answer the bill of complaint and make return on the rule to show cause, by answering the said bill of complaint article by article and paragraph by paragraph, specifically and expressly reiterating their position as set forth in the motion to dismiss, that the court is without jurisdiction; that all of the respondents, except the United States, are sued only in their representative capacities; that the United States is the real party defendant; that the bill fails to disclose a cause or right of action, or grounds for equitable relief or for an injunction.

III

For answer to Article I of bill of complaint your respondents admit the same.

IV

For answer to Article II of the bill of complaint your respondents admit the same.

V

For answer to Article III of the bill of complaint your respondents deny the same and each of the three paragraphs thereof and require strict proof of same.

VI

For answer to Article IV and paragraphs a, b, c, d, e, and f thereof your respondents deny each and every paragraph and the whole article except such as is expressly admitted; and further show that the quotation found in paragraph c is inaccurate and that the statement regarding the report of the Chief of Engineers and the submission to Congress is likewise inaccurate, since the Chief of Engineers reported to the Secretary of War, who in turn reported to the President, and the President himself reported the matter to Congress for action.

And respondents specifically deny that they are creating any channel or adding to the perils of the complainant, but, on the contrary, show that he will have as much protection under the adopted plan as he has at present and will not be in any worse position because of the construction complained of, but really in a better position than he ever was before and have greater protection from floods of the Mississippi.

VII

For answer to Article V and paragraphs a, b, c, d, e, f, and g of the same in the bill of complaint your respondents deny each and
29 every paragraph thereof, except the portion of paragraph a of Article V describing complainant's land, and fixing its

value, and deny these for lack of information, and require strict proof of each and every allegation made in said article.

VIII

For answer to Article VI and paragraphs a, b, c, d, e, and f your respondents deny each and every allegation thereof, save and except they admit the quotation from the 5th amendment to the Constitution of the United States as found in paragraph b of said article.

Wherefore, premises considered, your respondents pray that the rule to show cause be vacated and discharged, that the application for a writ of injunction be denied, and all of the demands of the complainant be rejected at his cost.

Respondents pray for full and general relief as to a court of equity and good conscience may seem mete and proper in the premises.

By their solicitors.

PHILIP H. MECOM,
United States Attorney.
JOHN C. DYOTT,
Special Assistant U. S. Attorney.
J. O. MODISETTE,
Special Assistant U. S. Attorney.

[File endorsement omitted.]

In United States District Court

Statement of evidence

Filed May 27, 1930

STIPULATION

It is stipulated between counsel for the complainant and the defendants herein that it is admitted that the United States has advertised for and received bids for the construction of certain parts of the work to be performed in the Boeuf Basin in carrying out the terms of the adopted project given in the act approved May 15, 1928.

It is further stipulated that the relief asked by the complainant in this case is and shall be confined solely to the construction in the Boeuf Basin within the district of the court where the suit is pending, and that no attack is made upon the adopted plan as such.

Record of evidence and testimony

OFFERS IN EVIDENCE

Senate bill 3740, known as the flood control act was introduced in evidence by counsel for complainant and was received and filed as

a part of the record; so also was House Document No. 90, 70th Congress, 1st session. (Fol. 1, 2.)

Mr. STREET. We wish to introduce a special report on the Mississippi River Commission made to the 70th Congress, 1st session, of its plan of flood control.

Mr. MODISETTE. We object to this for the reason that it is irrelevant and immaterial, that it is something or other that has not been incorporated into the adopted plan or the statute, and it is an unnecessary encumbrance of this record with this report.

The COURT. We are not concerned with the wisdom of the plan as you have stated in your opening statement. The only effect that this document could have would be merely historical, as I see it, bearing upon the reasonableness of the flood control. * * * Let it go into the record for whatever it is worth. Generally I think all of this could be taken judicial cognizance of by the court.

To which ruling of the court counsel for the defendants excepted and reserved a bill.

Mr. STREET. We wish to introduce the report of the commission Gen. Jadwin and Gen. Jackson and Col. Sturdevant, on the matters referred to them.

Mr. MECOM. That report, your honor—the Government objects to the introduction of it, especially in so far as it relates to the construction of works not in the Boeuf spillway.

The COURT. Well, I don't see how you can disassociate the other section of the plan with the Boeuf Basin, because it is all one common plan and no part of it without the other is complete. Let it be filed in the record and get the whole case before us.

To which ruling of the court counsel for the defendant excepted and reserved a bill.

Mr. STREET. We next offer those various acts of the President in partially approving this plan from time to time, including his final proof—photostatic copies of those documents from the records at Washington that I have here covered by our stipulation.

Mr. MODISETTE. Your honor, we understand as we are objecting to the introduction of these documents and the court overruling our objections that exceptions are being reserved.

The COURT. Yes. (Fol. 3, 4, 5.)

R. FOSTER KINCAID, Sr., the complainant, being called as a witness in his own behalf, after being first duly sworn testified on direct examination by Mr. Street as follows:

I am the complainant in this suit; own the 160 acres of land involved and in possession thereof. There are about 120 acres in cultivation with six houses and a barn and outhouses thereon. The approximate value of this land prior to the adoption of the flood-control plan by Congress was $9,000, and at the time of the institution of the suit was worth as much as $3,000. The land lies just about the center of the proposed spillway.

Q. What has been the effect of the adoption of this plan upon your land and its value?

A. Well, it has stopped all loan values and also the sale value.

Q. What was the condition of your land during the flood of 1927, with regard to overflow?

A. It was all under. (Fol. 6.) The water went over the land on the highest point about four feet.

Q. Where did that water come from that overflowed your land in 1927?

A. Well, it came in there from all ways, down from the Boeuf Basin.

Q. What effect has this action of the Government had upon your ability to raise the necessary revenue to carry on your farming operations?

A. It has made it hard for the people to get loans on this spillway land.

Mr. MODISETTE. May it please the court, we object to the answer as not responsive to the question that is asked this
31 witness. The witness is endeavoring to build up over a vast territory of people generally.

The COURT. Of course any statement, Mr. Kincaid, that you may make about anybody else necessarily is hearsay. Confine yourself to the effect upon your own property. (Fol. 7.)

Cross-examination by Mr. MODISETTE:

I was raised down in that community; am thirty-seven. In my lifetime I have seen only two floods that have covered my property. That was in 1912 and 1927. The flood of 1913 did not cover it. It took very little of my property. It did not take any that I had in cultivation. The flood of 1916 covered some of my property. (Fol. 8.)

The flood of 1929 took some water upon my land there—just a few rows. The flood of 1927 and 1912 did not entirely inundate my property. The flood of 1922 took part of it, but not all of it.

Q. Now, Mr. Kincaid, I believe you stated that you got this water in 1927 from below as well as above.

A. Yes, sir.

Q. In fact, it is difficult for you to tell where it came from, isn't it?

A. Well, I think so. Of course it came from below but lots of it came in there too when the levee broke. (Fol. 9.)

This was before any flood control project was even discussed or adopted in 1927.

Q. Do you not think the four feet of water on the highest point in 1927 would affect the value of the property any?

A. Well, it affected it some, sure; I know it did.

I do not recall the flood of 1882. The only years that I can say that the lands in that vicinity have been under water are 1912 and 1927.

Q. Well, if not from your personal knowledge you know from tradition that it has been overflowed, do you not?

A. 1882 is the only one I know of that took it completely, before that. (Fol. 10.)

I have owned the land since the fall of 1915, at which time I bought the first part of it. About three years after I saw it covered with water I invested in it. I paid about $3,800 for the land described in the petition. (Fol. 11.)

My property is all within the Boeuf Basin. I do not know exactly what it is assessed for. I had other property in the ward that is assessed in with this. I did not put this property in the suit because I did not need it.

Q. What do you mean by the statement that you do not need it?

A. That is all that was asked for to be put in.

Q. Now, who asked for it?

A. The people asked for it.

Q. Now, who asked for it?

A. The people asked for someone to volunteer to put their land in for a suit.

Q. Who?

A. The levee board—the attorneys for the Boeuf Basin floodway. (Fol. 12.) Some of the members of the levee board that were interested talked to me.

32 Q. What interest have you got in this suit outside of the nominal appearance that you have here in this case?

A. Just to protect my own interest down in that section; it would ruin my business in a general way.

Q. Are you representing anybody also in this suit besides yourself?

A. No, sir. (Fol. 13.)

I was not willing for the Government to take any of my land. The entire country is interested in my suit. It is in the spillway. The flood-control committee and the Tensas Basin levee board and a number of others are backing it up. The State engineers are backing it up. (Fol. 14.)

I estimate the value of my property down there to be $9,000, but I do not think I could sell it for that. I have not tried to sell it.

Q. You have not tried to borrow any money on it, have you?

A. No; I can not. The loan companies have all ceased to loan money in this particular section.

Q. Well, now, you have not made any attempt to secure loans on any of your property?

A. No; I have not. (Fol. 15.)

According to the assessment sheet the land including the 160 acres involved in this suit was assessed in 1927 for $5,200; in 1928 for $7,000, and in 1929 for $7,400. The other land owned by me in the Boeuf Basin has less improvements on it. It is mostly just woodland, some farms, but just a small amount. (Fol. 16.)

Q. Do you know how the assessment has been affected in the last few years on this property?

A. I can show you just in a minute here. [The witness produces assessment sheet.] Now it was affected in 1927 by a special act of the State legislature, you see.

Q. They postponed payment of taxes?

A. Yes, sir.

Q. And are these correct assessments?

A. Yes, sir.

So far as I know there is to be no levee constructed between me and the Ouachita River to the west. The distance from my property to the first proposed levee on the west side of the Boeuf Basin under the adopted plan would be from twenty odd miles—I do not know the exact distance. It is about forty-five miles from my property to Monroe. My property in that vicinity is now and has been and will be, so far as the adopted plan is concerned, exposed to the backwaters of the Ouachita River and its tributaries, and it has in the past and will in the future, so far as I know, receive and continue to receive the backwaters from the same source. (Fol. 18.)

Winsboro and Gilbert, I suppose, are the nearest points of approach to my land of any proposed levee on the adopted plan. The distance from my place to Winsboro is fifteen miles. I live at Winsboro. (Fol. 19.) I have occupants on this property. People in possession on it continually. They were disturbed in 1927 by the water. There has been no other disturbance of their possession.

Q. In 1927, at the crest of the flood, how far was it to high land from your place?

33 A. Fifteen miles. (Fol. 20.) In 1927 the water was about four feet deep right at my house. It stayed on around six weeks. It was higher at my barn and garage than at the house. Possibly six or eight feet deep around those two places. (Fol. 21.)

J. P. KEMPER testified on behalf of the complainant on direct examination by Mr. Street, as follows:

I am 61 years old; am a civil engineer, educated at the University of Alabama, with the degree of bachelor of engineering in the class of 1887 and of civil engineering in the class of 1896. Am a member of the American Society of Civil Engineers and of the Louisiana Engineering Society. In the profession of engineering I have made a study of flood control of the Mississippi River.

After the flood of 1912 I concluded that the levees only policy was an error, so then I undertook to study, to determine what the error was, and I found that the policy was based upon this theory, that if all the flood waters were confined within the channel of the river the bed would scour and this would result in an increased cross section and that would in time produce an increased velocity, and the capacity of the river would be so increased that flood stages would actually be lower. While I found instead of the velocity being increased it diminished, that even the bed did not scour, that instead of flood stages being lowered they were greatly raised, that the levees always lost, that they could not be built up rapidly enough to meet

the rising flood stages. Backwater areas at the mouths of the tributaries became immensely greater and encroached upon land which prior to the building of levees was entirely above a possible flood. My interest especially was to endeavor to advise those in authority that such was the case and that the "levees only" policy would have to be abandoned. Only some civil engineers were convinced. The Mississippi River Commission and the Army engineers continued with the policy of "levees only" up to and including the flood of 1927. As a matter of fact, the flood of 1927 drove them off of the levees in their effort to close an opening between Old River and Red River where the waters of the Mississippi and those of the Atchafalaya would be spread and the Atchafalaya could no longer carry those flood waters of the Mississippi to the Gulf. The Army engineers have now abandoned the "levees only" theory. (Fol. 23.)

I am familiar with the flood control act.

Q. Now, will you please state the present status of flood control as it affects the land of Foster Kincaid, the plaintiff in this suit? (Fol. 24.)

Mr. MODISETTE. If the court please, we object to that question because it seems to us he has asked the very question the court is called upon to decide.

The COURT. Well, he will be permitted to testify to the question of facts. The objection is overruled. I will direct the witness to confine his testimony to statements of facts, not what he knows as an engineer.

To which ruling of the court counsel for the defendant excepted and reserved a bill.

I have never been upon the Kincaid land, but I know from a map that it is within the area of Boeuf Basin floodway at the lower edge of the basin. It lies within the radius of the Boeuf floodway. The effect of the flood-control plan in Document No. 90 will be to inundate the Foster Kincaid land to a great depth, far more than ever before in a period of about once in every four years. (Fol. 25.)

I have studied past floods considerably and I base my statements upon my studies of the past flood. This land would have been inundated in 1912, in 1913, in 1916. It probably would not have been inundated in 1922. I base that upon the fact that the volume of water that came past down the Mississippi River passed Arkansas City at a stage of 60½ feet amount to about 1,850,000 second-feet and at 62½ feet it would be 1,950,000, which I calculate is approximately correct. I based it upon the fact that in 1929 at a stage of $58\frac{8}{10}$ feet there passed 1,787,000 second-feet and in 1927 at a stage of $57\frac{4}{10}$ feet there passed 1,712,000. From that I infer that 60½ feet, the stage at which the fuse plug will be blown out at the Boeuf Basin, there would be passing 1,830,000 second-feet, as near as it can be estimated.

In 1922 no levees broke up in that area and the volume that passed was only 1,760,000 second-feet. Hence I don't think the fuse-plug

levee would have flooded in 1922, but in 1916 there passed Arkansas City in the river 1,889,000 second-feet and there also flowed down the Boeuf Basin through Cypress Creek Gap 336,000 approximately, or a total of 2,225,000, or nearly 400,000 more than was needed to over-top the fuse-plug levee at Cypress Creek.

In 1913 there passed down the river 1,782,000 and there passed down through Cypress Creek 138,000, a total of 1,920,000, about 90,000 more than would have been necessary to have overtopped Cypress Creek fuse-plug levee. In 1912 there passed down the river by Arkansas City more than 2,000,000 second-feet. The amount that passed down the Boeuf Basin was not measured.

Q. Well, now, under the present status of flood control as it affects the land of Foster Kincaid, to what depth, if you have a break in the fuse-plug levee at the head of this floodway, what depth would the lands of Foster Kincaid be overflowed?

A. Well, I do not know definitely, but I think it would be very, very large, a very much greater depth that it has ever been before due to the fact that in the flood of 1927 there would have been more than 900,000 second-feet to flow down through that area, and that is twice as much possibly as has ever passed before. It has been estimated that 450,000 passed in 1927 and it is barely possible that as much passed in 1882, but that is exceedingly doubtful. I can find no record of where more than a maximum of 450,000 second-feet went down the Boeuf Basin in 1927. (Fol. 27–28.)

Under the adopted plan there would be expected to be sent down the Boeuf Basin more than 900,000 in the flood of 1927. On April 23, 1927, there was passing down the river by Arkansas City, I think, 1,712,000 second-feet, and there was passing down the Mississippi past Friar's Point 1,480,000, and down the White past Clarendon 431,000, and down the Arkansas past Little Rock 833,000. Assuming that 1,830,000 passed down the river at the stage of 60½ ft. there was a difference of more than 900,000 second-feet of water reaching the area at the mouth of the Arkansas River which could not pass down the main river at that stage. It would necessarily have over-
topped and gone down the Boeuf Basin had the present
35 adopted project been in effect at that time. This 900,000 second-feet of water would have raised the flood stages far in excess of anything that has ever been known.

In 1927 the river did not break in what is designated as the fuse-plug section levee under Document No. 90. There was no diversion of water from the main channel of the Mississippi River into the Boeuf Basin that year. (Fol. 28.)

It all came out of the Arkansas, between Pine Bluff and down to Pendleton. This was due to crevasses in the Arkansas River levee above the fuse plug of the levee on the Mississippi. (Fol. 30.)

Q. Now, I want you to get this question. State whether or not the fuse-plug feature of the adopted project will subject the land of the plaintiff Kincaid, involved in this suit, to additional destructive

flood waters that will pass by reason of the diversion from the main channel of the Mississippi River.

Mr. Monsarrat. If the court please, we object to any of this now which is beyond this jurisdiction beyond the Louisiana line. I submit that it is not the fuse-plug levee that this complaint is leveled at. He is leveling his complaint at the construction down here in the Boeuf Basin by the Government of what he terms guide levees. It is ultra petitions, and we object to going into that evidence up in Arkansas.

The Court. As I said, gentlemen, this whole plan is one system and it is so interlocked, one dependent upon the other, that we can not separate them. I do not see how it is possible to determine the effect upon this land without taking into consideration the whole scheme, as I said. If you reach the point, or what I consider the crux of this case, as to whether or not this man's land is going to have to bear a greater burden than it would have under the conditions as they previously existed, we have got to see what has happened, where the water is coming from, and why and how much it is going to put upon this land. The objection is overruled.

To which ruling counsel for the defendants excepted and reserved a bill. This objection and rule being made general to all similar evidence.

A. It will.

Any diversion of water through the Cypress Creek fuse plug in accordance with the adopted plan will be additional destructive flood water upon the land of the plaintiff, for the reason that there has not been a discharge of water from the main channel of the Mississippi River through the Cypress Creek area since the completion of the Cypress Creek levee, which was completed in time for the 1921 flood. Consequently, from that viewpoint, any water that will pass will be additional. (Fol. 32.)

This fuse-plug project proposes to extend the levee across the head of the Tensas Basin, forcing the water to come through the fuse plug between the guide levees and through into the Boeuf Basin. In other words, the water that went down the Tensas and some water that went through the west into the Bartholomew Basin, and shooting all of that water into the Boeuf Basin surely is added to the water which previously went through the Boeuf Basin up there, and what had gone through the Tensas Basin and would have gone west to
the Bartholomew. In 1927 five hundred thousand cubic feet
36 per second of water was diverted through Mounds Landing
cravesse into the Yazoo Basin. The project proposes to raise the levees along the river with the exception of the fuse-plug levee three feet higher and greatly strengthen them and likewise provide the fuse-plug section on the Mississippi and Arkansas so that there is not a reasonable chance of any of those other levees breaking, and at that point, in effect, in 1927, the water which went through the Mounds Landing crevasses into the Yazoo would have no recourse

in the world except to break the fuse-plug levee at the head of the Boeuf Basin, which is three feet lower and very much weaker than the adjacent levees, and that practically the entire volume of water that went into the Yazoo Basin would be obliged to go down the Boeuf Basin. (Fol. 33.) It is certainly additional in just that amount.

The project contemplates by means of Birds Point to New Madrid by-pass, to increase the discharge of the Mississippi River 450,000 cubic feet of water per second past Cairo and down the river. In case of a flood stage reaching 60½ feet on the gauge at Arkansas City, that would overtop the fuse-plug levee and would naturally result in the levee going out. (Fol. 34.)

In order to relieve the river the adopted plan provides for 900,000 up to nearly 1,200,000 second-feet going down through the fuse plug. This water would pass right down to Boeuf Basin to the lower Tensas Basin and down to the head of the Atchafalaya Basin directly from the main channel of the Mississippi River. The plan contemplates a guide levee on the eastern side of the fuse plug commencing at about Luna in Chicot County and going down to a connection with the Bayou Macon Hills. That guide levee will throw down into the Boeuf Basin all the flood waters that formerly went down the Tensas past Bayou Macon, which will prevent any passing down the Tensas. (Fol. 35.)

Q. The upper Tensas Basin will be protected and the water that would have destroyed it would be forced down the Boeuf?

A. Yes, sir.

The best records that we could find show that the greatest flood to leave the river at Cypress Creek and that vicinity prior to and including 1927 is about 450,000 second-feet through the Boeuf, and, I should say, 150,000 or 200,000 through the Tensas. (Fol. 36.)

Q. Now in 1927, if the levees on the eastern side of the river and those above and below the fuse-plug section had been filled up to the grade section as provided for in the adopted plan, then, necessarily, 900,000 feet would have had to go through the fuse-plug section in order to enable the river to carry down the balance?

A. Yes, sir; for a certain time.

Q. Under this system, when this plan is contemplated and these other levees are all built up, when we have a flood equal to 1927?

A. It will.

Q. Now, under the adopted project, the fuse-plug levee, as I understand it, is intended to hold the water in the main channel of the Mississippi River until it reaches the stage of 60½ feet.

A. Yes, sir.

Q. Assuming the completion of the plans and the construction of the guide levees, the eastern guide levee which will cut off all water from going through the Upper Tensas and the western guide levee which will prevent it from going over into Bayou Bartholo-
37 mew, and an addition to the water already going through the fuse plug to this Boeuf floodway, I want to ask you to state

what the result would be to the people and the land within that floodway, that diversion channel, with the levee giving way at 61½ feet at the Arkansas City gauge. (Fol. 37.)

A. When the fuse-plug levee would give way at a stage of 60½ feet, there would be stored in the basin at the mouth of the White and Arkansas Rivers an area of about 1,200 square miles of water to a depth of approximately 20 feet. The kinetic energy of that volume of stored water is very great indeed. Now, if the fuse-plug levee gives way, we will have that volume of stored water, fed by three great rivers, the Mississippi, the White, and the Arkansas, in volume 900,000 second-feet greater than can go down the Mississippi past Arkansas City. I don't believe there is a record in this world of that volume of water stored with that much kinetic energy suddenly released under similar conditions into a confined area varying from about ten to fifteen miles wide, which must necessarily go down that basin in huge waves, amounting to almost a wall of water. It will tear everything that is movable in front of it. It will destroy houses, railroads, and highway bridges, and fences. Now it is true, after it reaches the lower end of the basin and takes up its storage, its velocity will be less; but the damage will have already been done. There is nothing that I know of that is at all comparable to it except the Mounds Landing crevasse, and that was in much less volume. About half of it came out of the side of the Mississippi River below a bottle-neck effect where the levees on both sides of the river are very close to the bank, which resulted in a considerable reduction of the flood height on the gauge at Arkansas City. But if the Cypress Creek fuse levee breaks, it is going to come out of this solid stored area, and the basin right there at the river is twelve or fourteen miles wide. There would be no chance of any reduction until the dimensions of this break get great enough to absorb that 900,000 second-feet which is coming in excess of what can go down the river. That will place behind that volume of water such an energy that its destruction will just simply be enormous. (Fol. 38.)

The ground fall of the land through the natural diversion channel in a distance of 180 miles, or thereabouts, is 100 feet, the greater portion of which is in the upper area which flattens out as you approach the Red River and from Cypress Creek to about the latitude of Monroe, or the first ninety miles, is probably seventy-two feet, a slope of about eight-tenths of a foot to a mile. Such a slope with such a volume of water must necessarily produce enormous velocity. It will probably have a diminishing ratio when it comes down to where the slope is less, and then when it begins to get choked down at Sicily Island Gorge it is bound to slow up and it is then going to slacken the velocity. (Fol. 39.)

That gorge is only 8,000 feet wide, and to get 900,000 second-feet through a gorge 8,000 feet wide it must require a very great depth and great velocity. In the first instance, when the water first reaches

there it will require a greater velocity than it will flow at a great depth through the gorge and the velocity will still be great until the pool below has been filled enough to slow it down. (Fol. 40.)

38 I estimate that there are 70,000 people living in the Boeuf Basin. These people will be driven from their homes on an average of once every four years. If they can save their livestock with them they will be at a great expense in taking care of their families and livestock, and if they are not able to do it themselves it would probably be done by charity. When those people return, if they do return, they would find their property practically destroyed, their houses gone, their fences gone, and everthing they had partly destroyed. It would be absolutely impossible for them to rehabilitate and plant crops for that year at all. (Fol. 41.)

Q. Now, Mr. Kemper, you have stated that your opinion as an engineer is that the flooding of this Boeuf Channel by the diversion of a fuse-plug levee would occur once in four years on an average.

A. That is borne out by my study of past records.

Q. I will ask you, from your knowledge of the Mississippi River and your experience as an engineer, to state if you can how often that territory would be flooded by the first break in the fuse-plug levee if it was not restored.

A. Why, parts of the area would be flooded every year that the Arkansas City gauge exceeded about 45 feet, but it would never be flooded as deep as would be the case if it was built up by the fuse-plug method and then discharged into the basin. (Fol. 42.)

The record shows that the flow of the Mississippi water through the Mounds Landing in 1927 amounted to approximately 500,000 second-feet.

Q. With the flood-control plans completed, built up to the grade section provided for by the plan, except those in the fuse-plug section, how much Mississippi water, that is in a flood with the proportions of 1927 or even greater, could or would go through the State of Mississippi?

A. With the flood-control plan completed, none.

The reason for this is that the Yazoo Basin in Mississippi is going to be protected by a levee three feet higher and very much stronger than the fuse-plug levee at the head of the Boeuf Basin. I think it is a positive fact that the levee at the head of the Boeuf Basin will give way—that is the designed purpose—before it can flood into the Yazoo Basin of Mississippi. (Fol. 43.)

Q. Now, assuming a flood equal to that of 1927, where would the equivalent of 500,000 second-feet that went through Mississippi necessarily have to go?

A. It would come down the Cypress Creek fuse plug into the Boeuf Basin diversion channel. That is the project.

Cross-examination of Mr. Kemper, by Mr. MODISETTE:

If the water exceeds 1,830,000 cubic feet per second at Arkansas City, it will top the fuse-plug levee at the head of the Boeuf Basin

and come down the Boeuf diversion floodway. It did exceed that in 1912, 1913, and 1916. It did not quite exceed it in 1922, but it did exceed it in 1927. (Fol. 44.)

Q. Now you know that the recorded history and rather full engineering data run back to 1882?

39 A. Well, there is data back even very much further than that. Of the 1882 flood, discharge, almost nothing is known. The levee system fell through, and there is no value that can be obtained from that except the flood stages through the flooded area.

The getting of data goes back as far as possible as to time—not necessarily from 1882. The 1882 flood was very destructive in volume and discharge, though it is very doubtful that it has not been equalled since by 1912 and 1913 both. (Fol. 45.) It is a fact that the Mississippi River Commission data began about 1882. The records are written as far back as 1860.

Q. Then, why didn't you go back and take up some of those elaborate records and get the information and get your frequency of floods by a greater period than from 1912 to 1927?

A. For this reason: The levee system has been progressive, and it could not go beyond 1912, at Cairo, for instance, because prior to that time water escaped from the river between Cape Girardeau and Cairo, and your information at Cairo is theoretical rather than of value prior to 1912.

In my examination in chief I said that the plan at New Madrid states that it will increase the discharge of the river 450,000 second-feet. If that increased discharge is sent to the river, it must come on down to the mouth of the Arkansas—it can not stick up there. (Fol. 47.)

Q. How are you going to explain that there is an additional burden at some point below where the water reenters the river from what it was before?

A. Because, if you did not create that by-pass which increased the capacity below Cairo 450,000, the discharge of the river would have held the flow up at Cairo and above Cairo until the water below could have gotten out of the way. At it is now, you precipitate it down upon the mouth of the Arkansas River and precipitate the discharge as it now exists at least from Cairo down to the mouth of the Arkansas, increasing the burden exactly that much down the Boeuf Basin (48). The main channel of the Mississippi River is considered to carry a million eight hundred and thirty thousand second-feet at sixty and one-half, and then the Cypress Creek fuse-plug levee might break, because more water than that is arriving at the mouth of the Arkansas, and if it breaks that entire surplus must go down the Boeuf Basin diversion floodway and continue to flow until it has been absorbed and then they will both flow simultaneously. (49.)

I can not say what the velocity of the water would be as it leaves the Cypress Creek levee fuse plug and first reaches Monroe—a dis-

tance of 90 miles with a seventy-two-foot slope, after it has reached its slope. It is going to be variable, depending entirely upon how fast it is fed at the head, but the damage will be done in this terrific wave of water that will be coming down through the basin when it first opens.

Q. Well, how high or deep is your wave?

A. It starts with a head of twenty feet and then behind it the kinetic energy stored in 1,200 square miles of water and which is being fed by three great rivers placing nine hundred thousand second-feet or more into the basin than the main river can take out. It is hard to calculate minutely, but it is something enormous. (50.)

Q. Now, in all of your testimony in chief as to the destruction of this head of water, you pictured it going down as though it was going down an incline plane, an open flow with no obstructions from the timber. That was the picture that you drew.

A. I said nothing about an open flow and no obstruction, because I know some of it is timbered community and some of it is open fields. (53.)

I do not know how much of the Boeuf Basin within the lateral levees is timbered or swamp land. I know quite a good percentage is cultivated land; lower lands have timber on them. (54.)

The lateral levees that are proposed in the plan of flood control do not enclose all of the basin. The levee is wider at the lower end. There is no telling where that water is going to.

I testified that the discharge over the Cypress Creek levee, in the case of a crevassé, would be on the basis of 900,000 feet during the flood of 1927. (55.)

I don't know what the width of the break would be. I don't believe anybody knows. I don't assume that the width of the break will be the width or length of the fuse plug. The fuse-plug levee contemplated is 51 miles long. (56.)

Q. What do you call the head of the wall of water?

A. In the basin at the mouth of the Arkansas River which is being held in abeyance by the Cypress Creek fuse-plug levee.

Q. I know. I have reference to this destructive wall of water that you pictured as coming down and destroying everything.

A. It will leave that basin with the—after the levee breaks, then it will come down the Boeuf diversion floodway in a wave.

Q. How high is the wave?

A. I don't know. It depends on the size of the break. It will be plenty, too, before it gets through breaking up there, the whole 900,000 cubic feet of water.

On the basis of 900,000 feet discharge, the height will start at nothing and gradually grow behind to whatever height thas is necessary for the velocity to carry 900,000 cubic feet of water per second. (56.) It will be, to begin with, awfully destructive; the destructive effect will be when you release that head or volume of water.

Q. How fast did your wave of water that you pictured a while ago to the court as being so destructive—how fast does that travel?

A. Very fast.

Q. How fast?

A. I don't know. Fast enough to destroy property enormously. The velocity of the water down at Kincaid's property about 125 miles from Cypress Creek would not be as great as further upstream, but it would be very deep there. (59.)

I would not think that in time of flood stages as of 1927 Kincaid's property would be all covered by water from the Ouachita River backing up those streams down there. I am not minutely acquainted with Kincaid's property, but I know it is far enough down this basin to be influenced by the back-water area which is affected but little by the water of the Ouachita River and from water around the
41 lower end of Sicily Island. It would not be influenced very much probably by the Mississippi River, unless there was a crevasse. For instance, in 1922 there was a crevasse right opposite Natchez, and the water came almost straight to Kincaid's property.

Q. If the water comes down Bayou Bartholemew, Boeuf Basin, Tensas Basin, and goes back up in the Ouachita, the two come together, doesn't Kincaid get the water anyway?

A. Not unless the Mississippi is enormously high, because the Boeuf can not have any influence on the reservoir basin at the mouth of the Red River which takes a great volume of water out of it. The Red must have room to flow without anything like that happening. (60.) The water that came out of the Ouachita might have empounded there because it could not get away, but the water that made the flood came out of the Arkansas River. The Ouachita can make no flood in the area of Kincaid's land.

Q. With reference to the flood district of Louisiana, you have read the bill of complaint. Is it not a fact that nature itself has made a pocket down there on Kincaid's property that he is complaining of? Isn't it in the pocket by the natural topography of the country?

A. Why, sir, Kincaid's is in the Boeuf Basin, and the Macon Ridge to the one side and the hills on the other, coming close together at Sicily Island, and Mr. Kincaid is above that. There is plenty of other land within the Boeuf Basin that is similar to that. (61.)

The Ouachita can not supply sufficient water to raise that basin high enough to give Kincaid serious water unless it came out of the Red and the Mississippi.

Q. Now, if this adopted plan, in the case of a flood like 1927—if it is going to destroy Kincaid's property, why wasn't his property destroyed actually in 1927 flood?

A. Why, I thought I made that perfectly plain, Mr. Modisette, I told you that the 1927 flood came out of the lower side of the Arkansas River. But that is a comparatively small volume compared to the monstrous volume that will come out of the fuse-plug levee from these fuse-plug waters being centered and thrown into this basin.

Q. But you have not been able to tell what the velocity would be with the bulkhead coming out of the fuse plug, and when it gets to Kincaid's you don't know?

A. I can not tell what that velocity should be.

Q. Then, how can you say it is any more destructive than the flood of 1927?

A. I know it will be very great, but I can not measure it accurately. (62.)

If the lateral levees or guide levees were five miles apart, the velocity would be greater. If they were only a mile apart and with a flow of 900,000 second-feet, it would be greater still. It would be so enormously high and deep that you would just have to get it by guess. Velocity is controlled by slope and the depth of it, too. Assuming a head of water to be sudden, the speed would be controlled largely by the depth.

42 Q. And this would also be affected by timber and by marsh lands and by a lot of broken topography of the country; all of that would contribute as a resistance to flood water?

A. It would not contribute enough to keep it from being a very destructive velocity.

Destructive velocity depends upon the head. Two feet flow per second would not be very destructive to anything, perhaps, except fences and something of that sort; unless it was very deep, I don't think it would knock a house down. Four or five feet is destructive. (64.)

The destructive speed of water from the river will be progressive right down to the end—progressively less—but it would still be great till it got down to the Sicily Island Gorge. It would still be destructive until it got to Kincaid, but I do not know what the velocity there would be. But it would be five feet per second all right. (65.)

I do not know what quantity of water left the main channel at Mounds Landing in the 1927 flood. Measurements of crevasses are largely guesses. You can not foot them up like a trial balance, but it is figured at 150,000 second-feet more than the 900,000, but those are not my figures. I simply state that the water going into the Boeuf Basin was estimated at about 450,000 and in to the Tensas about 150,000; through the Mounds Landing Crevasse about 500,000. I qualify that by saying that nobody knew. The figures are taken from my best efforts. I took every figure I could find that the Mississippi River Commission had. I though that was the best source of information. If it is assumed that 70 to 75 per cent of the Boeuf Basin within the lateral levees is timber and swamp land, and not land in cultivation, the velocity by that resistance and its destructiveness would be much less on the timbered area (67), but correspondingly more in the cleared area where the improvements are.

Q. And you are not able to give the court any figures as to how fast it would come through the crevasse and would run over any of that?

A. I have never attempted to give specific figures. It looks clearly beyond any necessity to figure so monstrous a thing as that was. (Fol. 68.)

L. T. BERTHE, called on behalf of the complainant, testified on direct examination by Mr. Street as follows:

I am a civil engineer and have been such for 31 years. The first 8 years was primarily with railroad location and construction and the last 23 years has been in the water-power and water-supply and drainage and flood-protection work, almost altogether; in hydroelectric development and water supply I think possibly three or four years, and most of the remainder of the 23 years has been on drainage and flood protection problems. My railroad work was done mostly in Cuba, Mexico, and Spain, and some in Missouri, Kansas, and Oklahoma. The other work has been primarily in some four or five States, in the Mississippi Valley, and some in Nebraska, Iowa, Kansas, and Ohio in addition. (69.)

I have given the Mississippi flood-control problem more or less study in the last 20 years, and quite extensive study for the past two years. I am familiar with the flood-control plan as set out by
43 House Document No. 90. I have been over the area designated in the adopted plan generally, some of it in detail, and am familiar with its general characteristics.

Q. What will be the effect of the adopted plan so far as the diverted water from the main channel of the river over this particular territory, and give your reasons?

A. The adopted plan provides definitely for the diversion and taking out of the main channel of the Mississippi River and in the vicinity of Cypress Creek, at what is known as the fuse plug of the Boeuf Basin floodway channel, of 900,000 second-feet and carrying it down through the Boeuf Basin to the Red and subsequently through the Red through the Atchafalaya to the Gulf. In 1927 there was 500,000 second-feet approximately diverted through Mounds crevasse and through the State of Mississippi. An identical record flood to that of 1927, after the completion of the adopted plan, no Mississippi water will flow through the State of Mississippi or through the Mounds crevasse. Of the 500,000 second-feet which in the 1927 flood flowed through the State of Mississippi, all except 150,000 second-feet additional channel capacity provided by the raising of the levees in the adopted plan would and must be diverted through and over the fuse-plug section into the Boeuf Basin, into the State of Arkansas, and through the States of Arkansas and Louisiana through the Boeuf Basin. So that in an identical flood to that experienced in 1927 when the plan was not constructed, after the plan is constructed; at least 350,000 second-feet of flood water from the Mississippi River, additional flood water, will be diverted into and through the Boeuf Basin floodway. In addition to that, in the floods heretofore and up to the present time, the basin east of the Macon Ridge known as Bayou Macon territory, has always shared the flood load and flood

waters flowing through and into the Boeuf area. Under the adopted plan the Luna and Eudora guide levees will shut off the upper Tensas Basin and force these waters as an additional imposed burden upon the Boeuf Basin. As all that water must enter over or through this fuse plug, that would be additional water diverted from the Mississippi River. The only material difference between the diversion of the Cypress Creek and the diversion at Cairo, aside from the stage at which it is to become effective and the amount of diverted water, is in the mechanics of the diversion. Both diversions are so designed and constructed as to insure that diversion will occur at predetermined stages and predetermined locations. I give those two instances. There are others, but I have used the 1927 flood, because it is a known flood that has already occurred, and we can readily determine what will occur after the flood-control works are constructed, with the same flood or an equivalent flood occurring. (73.)

Q. As I understand your statement, there must necessarily be diverted, in a flood equal to 1927, 350,000 feet of water that went down through Mississippi which never touched Arkansas before, and then there will be the additional imposed burden to the Boeuf floodway of the water which is cut off and formerly went down through the Tensas?

A. In 1927 from crevasses in the Arkansas River levees there were some 600,000 second-feet that flowed down through the Boeuf
44 Tensas Basin and that some 150,000 feet went over the upper Tensas or 450,000 second-feet going through the Boeuf Basin proper. Under this construction all of any such water would have to take the Boeuf Basin itself.

By reason of the strengthening of levees below and above under a coordinated plan that raises or strengthens all of the levees both sides of the river above and below the vicinity except the original 35-mile section now and which I understand to be a 50-mile section of existing levee, which will be at its present strength and height creating a natural earthen spillway by building the sides of the spillway of earth at each end and then by building the sides of the diversion channel itself and creating a diversion channel from which or through which that water is to be carried by the protection of proposed guide levees on the sides of the Boeuf Basin and restricting the water flowing between those guide levees. So that when flood waters come down the Mississippi River at all stages approximate or exceeding 60½ feet on the Arkansas City gauge, which is the present equivalent height of that levee, the fuse plug will be overtopped and crevassed or might flow over the entire length of it, and undoubtedly it would be crevassed and this water discharged into the Boeuf Basin floodway. The present conditions are such that the channel without overtopping the levees will carry 1,800,000 second-feet. It is designed that with the floodway in full operation and the flood height up to the minimum freeboard described in the plan of one foot that the increased capacity will take care of flood water of

1,950,000 second-feet, and all the surplus above that is to be diverted over and through this fuse plug into the Boeuf Basin regardless of the size of the flood. (75.)

Q. In a flood equal to the 1927 flood, presuming the completion of all of the plans as they are adopted, would additional destructive flood waters be precipitated into this basin from the main channel of the Mississippi River?

A. Yes.

Q. Now, please state to the court how you arrive at that conclusion, presuming a flood equal to 1927.

A. 1927 not only had the 500,000 second-feet. First we had 1,800,000 second-feet (in the river), and we had 500,000 second-feet going through the State of Mississippi, and we had some 450,000 or 600,000 second-feet that came out of the Arkansas River and out of the Bayou Bartholomew and down into the Boeuf and Tensas Basins and really carried in the river 1,800,000 second-feet and on the outside of the river over 1,000,000 second-feet.

Under the adopted plan with a recurrence of the 1927 flood no water would flow out of the Arkansas River through the crevasse at Mounds Landing levee. It provides that there shall be no water go out of the river and that reaches below the Arkansas River or anywhere below New Madrid, between New Madrid and the river, there shall be no water going outside of the main channel of the Mississippi River except what is diverted at Cypress Creek. That is in addition to what may be excess back waters. (76.)

In 1927 water that went down from the breaks at Arkansas City of approximately 600,000 second-feet spread and went all over, through Bayou Bartholomew, through Boeuf Basin, through the Tensas Basin. It was confined only at the natural ridges. (77.)

45 Q. What effect will the carrying out of the adopted plan and the construction of the guide levees in the Boeuf diversion channel have upon the lands in that channel?

A. It will increase both in volume and depth and the velocity of the flood flowing at all times that diversion takes place at Cypress Creek. In other words, at all times that the stage prescribed is exceeded, 60½ feet, on the Arkansas City gauge.

If an additional flow of 900,000 second-feet is diverted there, it will be at least 350,000 second-feet more water than went through there in 1927 because that amount flowed on through Mississippi in 1927 and must flow through the Boeuf in a recurrence of an identical flood. That will be destructive. (78.)

Q. What will be the effect of the building up of all of the other levees on the Mississippi River both above and below the fuse plug section, upon the fuse plug itself, in event of a flood approximating the 1927 flood?

A. It will have no effect upon the fuse plug itself except that it will force the water to take that outlet over that particular reach of levee, and it will increase the frequency at which floods will reach stages of 60½ feet and over at Arkansas City.

Q. If the completion of the plan is carried out, the plan as adopted, would that result necessarily in flooding at Cypress Creek if the other levees are left in the condition they are before this plan is put into effect?

A. If I get your question there. There have been floods before and there will be floods again which will probably exceed that height, and which would be high enough and great enough in volume to overtop that levee. It does not follow that that would overtop that levee at the present time and under present conditions that levee in that basin is built, but if you raise that levee the leveeage may break elsewhere in that basin; but either that levee held or it may break through and not break somewhere else. In other words, when you have a diversion there now it is an accident. If you have a diversion afterwards it is a certain diversion; you substitute certain diversion for accidental diversion. The conditions may be stated about like this: If in a flood of a certain volume across there are twenty men down here in the valley which corresponds to the various drainage basins and nature says to those twenty men, "If we have a flood of a certain volume, out of these twenty men one of you must die," but the adopted plan says, if it is constructed, that if we have a flood of a certain volume, out of the twenty men, John Smith must die without accident, John Smith has no protection.

Q. You are talking—you are taking John Smith there as representing the Boeuf Basin.

A. Yes, sir; John Smith as representing the basin under this condition.

Q. Instead of giving him one chance in twenty to live, the plan says if this flood comes he is bound to lose?

A. He is condemned to be shot at sunrise without any defense.

Q. At present he is given an equal chance with the other nineteen?

A. Yes, sir.

At this point further direct examination was taken up by Mr. Freeman.

46 The Jadwin plan differs from the old plan in that it provides certain diversion channels in order to lower the water in the main river. One of these diversion channels is the Birds Point Basin. This one and the Boeuf are intended to divert water from the main river. The third one is known as Bonnet Carre, and is intended to divert water from the main river by means of a controlled spillway. That is on the east bank—the first east bank diversion. The Boeuf is so designed that it automatically goes into effect at certain predetermined stages for which it is constructed. There is no way to stop it; there is no control after it starts. (Fol. 81.)

The quantity of flood water that will be diverted under the Jadwin plan through the Boeuf channel, assuming that the 1927 flood is used as a basic point, would be from 900 to 950 thousand second-feet diverted out of the main river that did not flow through the Boeuf

floodway in 1927. There were some 600,000 second-feet that flowed through that floodway and the Tensas jointly in 1927, which was out of the Arkansas and not out of the Mississippi. The water that came from Arkansas was by reason of crevasses in the Arkansas levee. (Fol. 82.)

Cross-examination of the witness L. T. BERTHE, by Mr. Modisette:

Some of the water that came out of the Arkansas in 1927 found its way to Kincaid's property. All of it would come down into that territory.

Q. Then it would not make any difference if there were no lateral levees in the Boeuf Basin. It would not make any difference whether the water came from the Arkansas or the Mississippi as high up as Cypress Creek, Kincaid's property would get it, wouldn't it?

A. Kincaid's property would get it, yes, from either way, but it would make some difference undoubtedly in the rapidity with which it got there.

No water can reach Kincaid from the east except backwater, backing up around the lower end of the levee down to Old River unless you are going to have a crevasse in that levee. (Fol. 83.)

Kincaid's property is in the back-water area in excessive floods. It is subject to backwater by extreme floods. I have never been on his property. I have been very close there and might have been on it but I could not identify his field. (Fol. 84.)

There would be 900,000 to 950,000 additional second-feet of water coming over the Cypress Creek levee over what it was in 1927 in another flood under the adopted plan if put through. None went through there in 1927. This might be really more, because there are variable factors in that. (Fol. 85.) The adopted plan does not contemplate that any of the water will be permitted to leave the main river between New Madrid and Old River vicinity of Old River except through the Cypress Creek fuse-plug diversion. So the water that went out of the Arkansas crevasses in 1927 will not be permitted to go out. Under the adopted plan that water will remain in the Arkansas River going down to the Mississippi River, and the diversion will occur after it reaches the Mississippi; but you will have 600,000 second-feet which went out of the main river on the east bank through the State of Mississippi to take care of, either within the added capacity of the river itself by reason of the two-foot
47 effective raise of the height, or at flood depth the flood would flow through the fuse-plug diversion. So from that, taking these two factors, if that water is not to be taken care of through the main river, it must go through the diversion channel, and you will find we will have over 850 to 950 thousand second-feet more to go through the levee. The difference between 600,000 that came out of the Arkansas River in 1927 and 900,000 that will come out through the fuse plug under the adopted plan at another flood will represent the total additional flood water that the Boeuf Basin will carry regardless of its source.

The Mississippi River influences the height of the water in the Arkansas River and I could not tell you exactly how far. Theoretically I think to somewhere in the vicinity of Pine Bluff. The breaks in the Arkansas River in the 1927 flood all occurred within the influence of the Mississippi River water on the Arkansas according to my recollection. It occurred below Pine Bluff. (Fol. 86.)

I could not give the exact velocity at different places along the Boeuf Basin. I have some memoranda, but my data is too limited to attempt to definitely fix those velocities, and they could only be fixed after the basin had taken its storage and normal abrasion of flow. I should say that it has never been determined what the velocity would be coming out of the crevasse immediately after the fuse plug went into action and bringing it into the basin with certainty. I would not say it is impossible. One hesitates to say anything is impossible at this time. (Fol. 91.) The question as to how fast this water would have to flow or move in order to be hurtful or become destructive can not be considered independent of its depth, subject to fences and structures which collect drift. We don't consider velocities; it has not been our experience. In other words, I have not seen an impact of this equivalent of twenty feet of crevasse waters with velocities of less than two and a half feet per second which did a great amount of building damage, but it is different if it has great depth; as you increase the depth the damage is quite materially increased, due to the fact that, as has been in the Missouri territory, that we have wind storms almost invariably during the flood in the spring, and where you have a deep-water overflow, even with a very slow velocity and the wind comes up, the greater depth of water will absolutely tear up buildings. (Fol. 92.)

Q. Would you regard water four feet deep on Kincaid's property at the highest point under flood conditions such as 1927 a destructive flood water on his property?

A. I would consider it destructive to the extent that it would destroy crops beyond any doubt, if it occurred at the right time of the year and a depth of water of that depth would undoubtedly, if it was flowing with sufficient velocity to collect drift and destroy fences. (Fol. 93.)

As to any benefits or value to the lands for agricultural purposes of silt left on the soil after the water passes off—in strictly backwater territory, where water backs up slowly and goes out slowing there is usually a deposit which is beneficial as a fertilizer, but not so where you have a head water, where you have a cross flood. (Fol. 94.)

48 J. R. ADAMS, called on behalf of complainant, testified on direct examination by Mr. Street, as follows;

I reside at Lake Providence, Louisiana; am a civil engineer by profession, employed by the State of Louisiana as assistant State engineer and member of the board of State engineers. Have been a member of the board since January, 1925; was in the employ of the

the board for a good many years prior to that time, beginning in 1907. (Fol. 98, 99.) During the time I have been engaged as such engineer and board member my work has been principally levee work and levee surveys on the Mississippi River and the Arkansas—that is flood-control work within the State of Louisiana and southern Arkansas. I have had charge as engineer of all the levees of southeast Arkansas levee district since 1925. The lands described in the complaint are protected at the present time from overflow to the west of the Mississippi River by a line of public levees. (Fol. 101.)

The closure of the Cypress Creek Gap began in 1916 and was completed in 1920.

Q. Since that closure was completed, Mr. Adams, has the land of the complainant in this case of itself overflowed from the west of the Mississippi proper?

A. I don't think so.

There has never been a break in the levee on the west bank of the Mississippi River below the Arkansas River and above the Louisiana State line since 1920, when the gap was closed. There has been no water out of the Mississippi River that has overflowed the lands of the complainant since that time, from breaks in that river. Kincaid's lands were overflowed in 1927 from breaks on the Arkansas River and the crevasses on the Arkansas River. (Fol. 102.)

The waters of the Ouachita River do no overflow the section of the country where Kincaid's land is unless it is fed by the waters from the Arkansas River, except you might have back water coming off from up in the overflowed land generally. The obstruction of the flow of the Ouachita River alone has not sufficient volume left to overflow this land.

I am fairly familiar with the adopted plan of flood control. I have made a study of it.

I do not know when was the last time prior to 1927 that Kincaid's lands were subjected to overflow. There has been overflow water on it several years. The largest overflow was in 1912. From the best information I can get all his land with the exception of perhaps less than a half acre was under water at that time. This water came down the gap of Cypress Creek; also it broke the Mississippi River that year—in Chicot County, Arkansas, and the water of the Arkansas through this break and what flowed around through the Cypress Creek Gap caused the overflow. (Fol. 103.) He has had no general overflow since that time; he has had water on his land in other years but not to that extent—not since 1920, when the Cypress Creek Gap was closed.

The Cypress Creek Gap was closed by the interests of that country up there, particularly levee boards. Everybody wanted it closed. The Government ultimately granted permission to close it, on condition that the local interests would provide drainage through
49 there and take care of the drainage of Cypress Creek, and this was done by the drainage board created for that purpose.

(Fol. 104.) The work of closing the gap was paid for jointly by the Arkansas and Louisiana levee boards.

Q. It is contemplated, Mr. Adams, in the adopted plan that 900,000 second-feet shall be diverted from the river at Cypress Creek at the fuse-plug levee. What would be the effect of such diversion upon the lands of the complainant in this case, Mr. Kincaid, as far as overflow and depth of overflow is concerned, with the other works, the guide levees completed in accordance with that plan?

A. Well, I think, with the plan completed and in operation—I think you will have at least ten feet more water on that land than you had in 1927, with 900,000 second-feet coming through the basin. Of course you would have to have a big flood to produce that much water.

Q. Well, can the Mississippi channel between its levees carry a 1927 flood water without taking out 900,000 second-feet?

A. No, sir; you can not do it.

In a flood equivalent to the 1927 flood it would necessarily put 900,000 second-feet through there. (Fol. 106.) And it would result in overflowing Mr. Kincaid's place probably ten feet, more or less.

The highest point on his place in 1927 went about four feet. That was about where his residence is located. With this plan in operation the flow would be accelerated by 900,000 additional feet.

I could not tell you in fact just what the depth of the water was at other places than at Kincaid's residence in 1927. It varied from four feet at the highest point to about six or eight feet—his barn six feet, at other houses probably eight feet; as much as twelve feet in low places. (Fol. 107.)

My general information is that 500,000 second-feet of water escaped from the main channel of the Mississippi River Mounds Landing crevasse in 1927. We get that from the Government report. It has been approximated that 600,000 second-feet came down from the breaks on the Arkansas River on this side of the river; and we have estimated that probably 450,000 of this came through the Boeuf Basin and about 150,000 through the Tensas.

Q. Under like conditions, Mr. Adams, if this adopted plan was carried out, where would all the water be coming from up there?

A. The water would go through the Boeuf Basin necessarily.

Q. Then the Tensas Basin benefited to the extent of having water kept off of it?

A. Yes, sir; the largest part of the Tensas Basin would be protected; the lower reaches, however, would not have.

Q. That would be back water down there from Old River?

A. Yes, sir.

Q. So there would be no head flow from above by reason of the break in the fuse-plug section?

A. No, sir. (Fol. 108.)

I believe the Mississippi River Commission's estimate of what the height of the river would have been at Arkansas City, if there had been no break in the Arkansas River levees and in the levee at

Mounds Landing, was 69 feet. According to that estimate
50 it would be 8½ feet above the fourteen-grade section levees—higher than it was in 1927; and if that is approximately correct, unless a part of the excess water is diverted from the river, if another 1927 flood happened, it would overflow all the country around there; it would overtop all the levees that we have at this time; and even under the new plan it would overtop them without the operation of the fuse plug. If a break occurs when the fuse plug is in operation and takes out this water from the main channel of the Mississippi River, I would not say there would be any benefit to the land within the diversion channel. This land would be flooded. The benefit would be to the river above and below and the various basins—the Arkansas, the White, St. Francis, and Yazoo. The overflowing of the Boeuf Basin is to benefit the remainder of the valley and prevent overflows to the remainder of the valley. (Fol. 111.)

I have had a great deal of experience with crevasses and levees during the time I have served as a member of the State board of engineers.

Q. I will ask you if, when a levee breaks with considerable head of water against it, whether or not it does not scour out the ground there and cut out a channel, so that after the water of the river falls within its natural banks it still continues to flow out through there and overflows the land below, after the river has gotten back into its channel?

A. That is true, Judge, but not to any very great extent, because they don't—this channel generally doesn't get very far back from the mouth. We have had some of them at Mounds, up in Mississippi. The Mississippi cut new banks and probably ran after the river was back in its channel.

Q. Isn't it a fact that in the break on the Arkansas River that we had three successive overflows occur before we could get the holes closed up?

A. Yes, sir; we had three or four overflows from the Pendleton crevasse.

Q. With the height of 60½ feet against the fuse-plug levee, the levee would break and the break was wide enough to take through 900,000 second-feet. I will ask you if it would not so tear out the surrounding ground there that the water would continue to flow through there long after the river was back in its banks?

A. It would flow after it was back in its banks; yes, sir.

Q. Wouldn't it just prolong the overflow to such extent that there would be no chance of making a crop?

A. Yes, sir. (Fol. 113.)

Cross-examination of J. R. Adams, By Mr. MODISETTE:

When the levee broke on the Arkansas River at Medford in 1927, the Mississippi backed over against it. When it broke, the head of

water above the bank at Medford was about 21 feet. All of the vast water storage of the Arkansas and White Basins were back of this break. I could not say how rapidly the water from the Medford crevasse came down the Boeuf Basin. It was a very short time flowing by that section as far as Arkansas City, but after it got below there it was considerably slowed up. There was no wall of water—large head of water—coming through the country. We don't usually see it coming that way. It usually comes by following the various streams until they fill up and then the ground floods up rather rapidly; not in a wall. (Fol. 114.)

51

In my examination in chief I stated that in a repetition of 1927 Kincaid would have approximately ten feet more water on his property—may be something less than that. I arrived at that figure from flood lines that are up there. The Government shows that it will be about thirteen feet of water more in this section. I am mostly quoting Government figures. It is the Government's guess and not mine. (Fol. 115.)

Q. Well, is it the Government's information that you have been giving all along about Kincaid's property?

A. No; I didn't rely on them. In fact, I went down and got it myself.

I don't think the Ouachita floods would put Mr. Kincaid's property under water. Of course, if there were high stages enough in the Mississippi River and it backed up in there, he could get some water. There is nothing to keep water from backing up below in case of high water up on Kincaid's property and overflowing his land. (Fol. 118.)

The elevation of Kincaid's land is 66.9 mean Gulf level on the highest point.

Q. I am going to ask you if Kincaid's property is not in the natural bowl or natural basin that nature has made, independent of any levees?

A. No, sir; I would not consider it so. Fairly high ground. It is on a ridge, Bayou Macon Ridge. I don't consider it in any natural bowl.

Q. It is higher on either side than it is there, isn't it?

A. No; I don't think it is; very little difference. Kincaid's land is not the highest point of the ridge, but it is on the ridge. It is on the slope. (Fol. 119, 120.) The ridge is almost twelve miles across. To the best of my knowledge all of the country in there was under water in 1927. There was probably some of it under water in 1922, but not all; it was under water in 1916, in 1913, and in 1912, and in 1882 my historical information tells me it was under. Kincaid had protection from the Mississippi except the Cypress Creek, which was not closed up until 1920. In 1922, 1927, and 1929 he did not have the Cypress Creek problem to contend with. (Fol. 121.)

Q. He didn't have anything to do with closing the Cypress Creek, did he?

A. Well, he was paying taxes on that; yes, he helped do that.

W. L. CALHOUN, called a witness for the complainant, testified on direct examination by Mr. Street as follows:

Reside at Reyville, Richland Paris, Louisiana. Have never been on the Kincaid place. I am secretary-treasurer of the Reyville-Boeuf River National Farm Loan Association; my business for years has been dealing in real estate and farming and sawmilling and handling loans. I am acquainted with the lands over north of Kincaid's.

Q. Is the Boeuf River National Farm Loan Association making loans now in the Boeuf Floodway—proposed Jadwin spillway?

A. No, sir; have absolute instructions to stay out of there.

52 Before the adoption of the flood-control plan the association made loans on land in that fuse plug. Prior to 1928, when I became secretary of the association, I made quite a number of loans along the Boeuf River and in that section myself. The reserve loan bank is not, so far as I know, making any loans there. In fact they gave very definite instructions to stay out of there.

Q. Why is that? Why were those instructions given, Mr. Calhoun?

Mr. MODISETTE. We object to that unless this witness knows why they were given.

The COURT. Don't answer unless you know of your own knowledge, Mr. Calhoun.

A. Well, the officer of the bank told me. I don't know whether that is hearsay or not. (Fol. 122.)

The instructions were given on account of the proposed Jadwin spillway or the Boeuf River spillway. The instruction was: "You stay out of that spillway territory."

If the lands located within the Boeuf diversion channel at the present time have any loan value it is a nominal loan value. It has none with the farm loan board.

Q. What was the loan value of improved real estate in that basin before the adoption of the flood-control plan?

A. They have a number of loans along the Boeuf River ranging from fifteen to thirty dollars an acre; that is, the amount of the loans.

Fifty per cent of the value would be loaned.

Q. By Mr. FREEMAN. And twenty per cent of the insurable improvements?

A. Twenty per cent of the——

Q. Of the home.

A. Well, I think——

Mr. MODISETTE. If the court please——

Judge FREEMAN. Well, I withdraw the question.

Mr. MODISETTE. I don't want to continue to object, but the complainant himself admitted this morning on the witness stand that he neither tried to procure a loan on his property nor tried to sell

his property; and I think that ought to end the issues as to this case as to values.

The COURT. The value of a man's property, of course, is what he can sell it for or what he can obtain a loan upon it for. The fact that he may or may not have tried to get a loan upon it may be proven, if that fact exists. But if he made no such effort, and it be a fact that nobody ordinarily and normally will loan money on the property that is relevant as to the consequences to this property that is in the spillway. Of if there is any evidence that he has not made an effort to sell the property and can not sell it, it becomes relevant then upon the value of the property in the locality.

To which ruling of the court the counsel for the defendants excepted and reserved a bill, and the objection and ruling made general to all similar testimony. (Fol. 124.)

Cross-examination by W. L. Calhoun, by Mr. MODISETTE:

I made no loans in 1929 for the company I represent; made one or two or three in 1928. They were made in Richland Parish; none in Franklin Parish. (Fol. 125.) The association made only a
53 few in 1927. The information came to the local association not to make any loans in the Boeuf Basin since the 1927 overflow; don't know the exact date.

Q. Was not that overflow the motivating power behind the request that you stay out of there?

A. Well, now, I can not—I mean I am not—rather, I don't know. I rather think it was though.

I don't know that the Federal loan bank is not making any loans anywhere much in Louisiana. They told me that if I could get a man outside of the spillway to fire down the line.

There have been two loans foreclosed by our association this year; one last year, I think. I don't believe there was more than one foreclosure in that association before. It has made twenty-nine loans in all, as I remember—during the time it has been running—probably six or eight years. All that have been foreclosed are on the proposed Boeuf Basin spillway. (Fol. 127.)

D. M. STEVENSON, called by the complainant, testified on direct examination by Mr. Street, as follows:

I live at Monroe. Have lived there since 1902. Am correspondent for the Union Center Life Insurance Company—their financial division. The principal business of that company in this vicinity is farm-mortgage loans. I have charge of that department for the company in Louisiana. I have been in that position since 1902. (Fol. 128.) The Boeuf floodway territory was regarded as our loan field, and we have made mortgage loans and investments all through that territory. We have loans now on properties in possibly all of the parishes in the proposed flood way.

Q. I will ask you if your company is loaning money on any land situated within the Boeuf flood way now.

Mr. MODISETTE. If the court please, that is objected to for the reason that the only land involved in this case is the land of Kincaid, and it is not permissible, we take it, to go out into an expedition, or examination, into the entire territory as to loan values, and for the further reason that Kincaid having, as we believe, successfully placed himself beyond that condition by his own admission on the witness stand, the evidence is irrelevant and immaterial.

The COURT. Well, we threshed that out yesterday. I think the testimony is admissible. The objection is overruled.

To which ruling counsel for the Government excepted and reserved a bill. (Fol. 129.)

Mr. MODISETTE. Will the court permit that objection to stand as a general objection on all testimony of similar character from this and all other witnesses?

The COURT. Let the objection and ruling be made general to this witness and all testimony of a similar character from other witnesses.

A. No, sir.

Our company gives us what is known as a quota or financial allotment on September 1st, being the quota that we can use thereafter in loaning this money for farm-loan purposes, and when that quota is given out there are instructions given with [illegible] as to the extent and character of territory upon which we may proceed to make
54 loans, and since September, 1927, we have been prohibited from accepting applications from any territory that could possibly be affected by the proposed spillway or flood way. (Fol. 130.)

Cross-examination by Mr. MODISETTE:

This was the result of the proposed flood control, the filing of this report. I know that to be true because when the proposition came up for flood control we began to look into it and the company took that attitude toward it. I do not know whether the Mississippi River Commission and the Chief of Engineers had made a report to Congress as to the best means of flood control on September 1, 1927.

Q. How did you arrive at your conclusion that this was all done because of this flood-control program?

A. I judged that from hearsay and newspaper reports that there was going to be a spillway or flood way. I don't know about those dates now.

We made a good many loans in the Boeuf Basin prior to 1920. (Fol. 131.)

I expect we made more before 1920 than we have since. Our loan business has not been especially slow for the last few years. We have had many restrictions. We have had offerings we were not able to take up. We have regarded the levee system as being protection. When the spillway matter came up, we took it to mean greater danger. I remember that prior to 1920 the Cypress Gap was open

and this whole basin was subject to overflow by water backing up and coming down through it. I remember also when it was closed. I know there was a flood in 1912 and in 1913. We had a series of floods; I can't answer as to dates. Our company kept making loans right straight along in there in the past. We did not expect those to continue. I should say we have made eight hundred thousand dollars in loans in Louisiana in the last year—mostly in the Shreveport district and in Bossier and Red River and some over in Franklin. (Fol. 133.)

J. H. WATKINS, called for complainant, testified on direct examination by Mr. Street as follows:

I reside at Ouachita Parish, West Monroe. Am engaged in the real estate and loan business. Have been ten years in the loan business. I am at present secretary and treasurer of the Ouachita Farm Loan Association. I have held that position ten years. Prior to 1928 our association made some loans on lands in the territory designated under the adopted plan of flood control as the Boeuf flood way. (Fol. 134.)

Prior to this spillway program coming up we made quite a number of loans. We have loaned a little less than a million dollars in that territory. We are not now making loans in the territory known as the Boeuf spillway. We ceased making loans there sometime shortly before the 1927 flood. Our company loaned 50 per cent of the appraised value of the land when it was in business in that territory.

Q. Can you state to the court the amount of the loan on any given number of acres so as to give us some idea as to the value of the property, the actual value generally of land in there at that time?

A. Prior to 1917——

55 Mr. MODISETTE. If the court please, we would like to know the purpose of this. What is the object of finding out how much he loans on an acre? Is it for the purpose of fixing the value of Kincaid's property? We can not see any relevant purpose for which it would be admissible.

Mr. STREET. It is for the purpose, if your honor pleases, of showing that prior to the adoption of the flood-control plan it had a certain value at that time and we propose to come on down and show the value now, and then I shall ask the witness what has caused that difference, if any, in values.

The COURT. Objection overruled.

A. Prior to 1927 there the values fixed on real property of that character were determined by crop production largely. The price of crops, of cotton, had a great deal to do with farm values, of course, for better or worse, and that is the manner in which values were largely fixed prior to 1927.

The values range with the price of cotton at various times, but forty to fifty dollars an acre would be considered a fair valuation for farm land within that area, ranging up to, in 1918, as high as $100 an acre and as low as $30 to $25 per acre owing to the boll-weevil situation and crop production.

Q. Has the property in that basin any loan value now, and if so what is that loan value?

A. I was instructed by the farm loan bank not to make any loans within the area affected by the Jadwin flood-control program. (Fol. 137.)

Cross-examination by Mr. MODISETTE.

I took charge of the Ouachita Farm Loan Association in this country about 1918, and I made loans on what has just been referred to as prohibited territory when we first started the association. I think we made a number of loans in the Boeuf Basin in 1918, 1919, and 1920. I knew that the Boeuf overflowed in 1912, and in 1913, and in 1916, but I went in in 1918 and made loans and made them straight through up until the flood of 1927. The straw that broke the camel's back was not the flood of 1927. The proposed Jadwin program coming along with certain conditions rather created a sort of menace against the territory as a future loan territory, and they warned us against proceeding in that territory until the question was settled. (138.) We got instructions from the Federal loan bank to cease making loans in this area early in the season or after the flood of 1927. We abandoned the loan business in the Boeuf district as soon as we had received instructions. That was after the flood of 1927. I don't recall what month it was. It was shortly after the flood. We are only making farm loans now in the Hill territory. Our territory is limited under our charter to a territory commonly called "plastered." (139.)

So far as we are concerned we have reached our limit for desirable mortgages in that country. I guess it is pretty well known that every farm in the Boeuf Basin is covered by mortgage. Nearly every farm that I know of on the Ouachita River is mortgaged. I think it would be going a little too far to say that every one of these farms is mortgaged up to what you might term the hilt. Land values are looking up. Land values outside the control plan are looking better, the way I see it, not as a result of this program; it is a general condition that pertains to a progressive community. (Fol. 141.)

All agricultural lands have been down since the depression of 1920 in loan values on lands and everything else based on the 1918 prices, but not over the 1914 and 1915 prices. The depression of 1920, together with the flood of 1922 and the flood of 1927, with the threatened flood of 1929, together with the boll weevil, all these have contributed to affect land values in the Boeuf Basin. (142.)

Notwithstanding the facilities furnished by the Intermediate Credit Bank, it has been hard for the farmers to get advances and get supplies or otherwise to make their crops.

Redirect examination by Mr. STREET:

The technical points of the flood-control program were not known to me at the time we were instructed to make no more loans, but

it was indicated by the Federal land bank that it would be wise to leave off making loans within that territory—within the guide-line levees. (144.)

H. W. WANTLEY, called on behalf of the complainant, testified on direct examination by Mr. Street as follows:

I reside at Rayville, twenty-four miles from Monroe. I am acquainted generally with the outline of what is known as the Boeuf floodway. I have seen maps of the proposed floodway. I am engaged in the real-estate business; have been for twenty-five years. Have operated such business over Louisiana generally and more particularly in Richland and Franklin Parishes. I don't know the Kincaid land. I know that locality and have been in there a good many times, but I don't know just where the lines run. I am acquainted with conditions and values of land in that vicinity and in the area in and around the Kincaid land. (Fol. 147.)

As to sale values, there is considerable difference between the values of this land at this time and prior to 1928. The Boeuf Basin land, I consider, had the best average value of our river lands prior to 1928. There was always more or less demand at that time for lands in that vicinity. At the present time I can't interest anybody in lands in the Boeuf floodway territory.

Q. What has caused that change in the condition?

A. Well, the representatives of the loan companies tell me it is because of the proposed floodway. (Fol. 148.)

Some of these companies have been very lenient, especially the Federal land bank, but I know of some foreclosures that have been made on some properties that they have had to take losses on within the spillway territory. There is one place formerly owned by Johnnie Meyers of 398 acres located in Richland Parish, on the west end of the Boeuf River, a beautiful piece of property, improved very much more than the average, with a nice residence, barn, and good tenant houses. Approximately seven years ago a company made a loan on this property of $10,000, and they foreclosed it, I think, in June, 1928, and sold it at a loss of $4,000. I think that is a pretty fair example of conditions in that territory as they exist there to-day. (Fol. 149.)

57 On the assumption that we are getting fifty per cent, this would make it a fair value of twenty thousand dollars at the time of the loan.

Cross-examination by Mr. MODISETTE:

This property is owned by Mr. Robert Rhymes now. That was in the Boeuf Basin between the guide-line levees on the west bank of the Boeuf River. (Fol. 151.)

Q. You don't know whether they lost $4,000 or not?

A. Only Mr. Green, from New Orleans, came up and told me about it. He came up to sell me the property, and he told me that while he was there.

I do not think that the property has all been annihilated by this project, because I can not conceive of the project, as I understand it, ever going through. If it did go through it would be annihilated, but I can not conceive of it ever going through. I don't think it will. (Fol. 152.)

I attribute the destruction in values to the adoption of this flood-control program. I don't think there is any question about it at all. The values in Tensas as well as the Boeuf have not slumped in the past two years. We have never recovered from the 1920 slump in values, because values went so high in 1918 and 1919 that they were unreasonable, and these people who bought stuff at high prices had had too much increased value placed on it. Fifty per cent, I would say, was the average. I sold land as high as $75 in 1918 that I considered worth $35.

I would not think just offhand that more than fifty per cent of the farms in Richland are plastered with mortgages. (P. 153.) The unreasonable inflation of 1918 and 1919, with the resultant deflation in 1920, the flood of 1922, the flood of 1927, the threatened flood of 1929, the boll weevil in the cotton country, and the general agricultural and economical unrest throughout the country, either one of these would contribute to the loan farm value in the Boeuf Basin. I feel that our values right now are on the upgrade outside this proposed spillway. In fact, in our business I presume in the last twelve months outside of this spillway we have had about an average of prices obtaining prior to this inflation and deflation. (154.)

A. F. ENGLAND, called for complainant, testified on direct examination by Mr. Street as follows:

I reside at New Orleans, Louisiana; have been in the cotton business up to a few months ago, am not in any business at the present moment. I have lived in Rayville for about twenty years and have visited over in the Boeuf Basin quite often. During the past several years I have had a place on Boeuf River of 1900 odd acres. It is right on the bank of the river. (Fol. 157.)

In 1928 I was acquainted with the value of land in the immediate section around Richland and Franklin and Morehouse. These lands were more valuable than lands in the hills of north Louisiana. The lands from Monroe on the east bank of the Ouachita River on to the Mississippi are about alike in value, with the exception of the lands right adjacent to the Mississippi, which are better and worth more money. The lands within the floodway I think are
58 above the average of the general run of lands. I have never been able to find any market value for land within the Boeuf floodway. I can not say whether the lands within the Boeuf floodway have any loan value now. I have never inquired for a loan on them, so I do not know. (Fol. 158.)

I have offered land for sale in that vicinity and have talked to a number of people, but I have never been able to interest anyone. I have talked to a number of people with reference to the sale of my

own land. That condition has existed ever since this floodway proposition has been discussed.

Cross-examination by Mr. MODISETTE:

That started, I would say, a year ago. I have tried to sell that land only since this flood proposition. I have not been up there much. (Fol. 159.)

I have mentioned it to three or four, but they are not interested. I do not think the present depressed values are due to the 1920 crash, the 1922 flood, the 1927 flood, the threatened flood of 1929, the boll weevil in the cotton country and the general economic unrest in the whole country. These are factors, but only temporary. I think the boll weevil was a godsend. If it had not been for the boll weevil we would make so much cotton that it would be down to five cents a pound, and that would be worse than the flood. The people fight and kill the boll weevil and spend enormous amounts of money trying to get rid of it because that it is a local issue. If I could kill them on my place, I would like for them to be on the other man's land so I could make more cotton and get more for it. (Fol. 160.)

The spillway will hurt my land more than others. I only had eighty acres under in 1927. My land was above the overflow of 1927, but if you put a spillway in on me it kills me out completely. I do not believe it will effect the actual value of our land, because I do not believe it will ever be allowed to go through, but most of the people think so, and therefore it would hurt the value of the properties. (Fol. 162.)

C. W. GAINES, called for complainant, testified on direct examination by Mr. Street as follows:

Have resided at Rayville thirty years. I have some farming interests and am connected with the Mutual Life Insurance Company of New York. I am acquainted with the lands in the Boeuf floodway. (163.)

I am familiar with their value generally, and have been possibly more familiar with values during the past ten or twelve years. The lands within the proposed spillway have substantially decreased in value, I think since 1928, due to the proposed floodway. With the area that I know in the proposed floodway in the parish of Richland, West Carroll, and Franklin, seemingly there has been little sale for lands. It is my observation that there is little desire to make loans unless the moral risk of the one applying for the loan was sufficient to help support it. From the standpoint of land values the corporations and banks seem to have little desire to go out and make loans. (Fol. 164.)

I do not think that condition prevailed prior to the time the floodway project became a matter of discussion.

59 Cross-examination by Mr. MODISETTE:

I do not think the 1927 flood was a more potent factor in decreasing values than the proposed flood-way plan. The thing that seems to affect the area in the lines outlined in the reaction brought about on the labor situation within those proposed lines. This has been my experience and observation not only with my own tenants, but in discussing the matter with many other planters within the confines of these guide lines I find it to be the same with them. Regardless of when the water may come, whether it is for ten or twelve years, the man who lives within the confines of the levees stands constantly in the knowledge or apprehension that some day he and his family and his folks and possessions will all be wiped away. That has been about one of the greatest subjects of interest among our people within those guide lines. This feeling was not so much affected by the flood of 1927 or the threatened flood of 1929. Of course these floods have had some reaction, but a great many of the people throughout that area were born and raised there. They have had floods there since childhood and those calamities have come and gone and the land made more fertile in these lowlands. The fact of the levee being placed out there possibly four or five miles east of this town and then just west of the line of the town in which I live, possibly, the people who were within the confines of this proposed spillway can not feel very restful over that situation. (166.)

Q. You would be perfectly willing to have these lateral levees in the Boeuf Basin abandoned or omitted by the Government if the Government saw fit to do it, would you not?

A. I would rather not have these levees down there; yes. I don't think they will do us any good and they may do us a whole lot of harm. (169.)

W. E. HUMBLE, called for complainant, testified on direct examination by Mr. Street as follows:

I reside in the southern part of Richland Parish. I am a cotton planter, merchant, and in the banking business. I own 4,000 acres of land within the confines of the Boeuf flood way. All but about 100 acres was overflowed in 1927. That was almost a destructive flood to me. I had about sixty houses floating at one time, and the church house my darkies worshipped in; my barn, chicken house, and everything else went to rack and I lost practically everything I had in that flood, and only made 300 bales of cotton after it. If twice as much water as came down through there in 1927 was forced down in the confines of the flood-way area, raising the heights of water approximately ten feet above the 1927 flood, I don't think I would have any properly left. I would just have to get a boat or ship or something to get out, just as quick as I could. (Fol. 170.)

I am acquainted with general land values in and around Franklin Parish and have been all my life. These lands prior to 1928 had a sale or loan value. There was quite a good deal of trading going on.

There is not much trading worth while going on in that country now, only in the way of mineral leases and things like that. There exists a feeling of unrest and fear with regard to the proposed floodway going in and ruining the people. It is the certainty
60 of being overflowed which brings about the feeling of unrest. We know that we will be overflowed under this plan and be wiped out completely.

Cross-examination by Mr. MODISETTE:

I made a good crop this year. I am in a prosperous condition. I made a good crop last year. I did not make anything in 1927. We only made 300 odd bales. I can't get by with that. (172.)

I have been informed and understand that the water will have a 55-foot headway at the north end of this basin. I heard it discussed in Rayville at a public meeting. Engineer Lee and a lot of people were there, and they discussed the fact that it will be done that way with this fuse plug, as I understand it, and when it gets that high it will blow the fuse plug. I don't understand the technical part of it, but at any rate it will let the water come in, open the gate, or it will do something, I don't know what it is. Anyhow you are going to pour that water in on us. I don't know how it is going to be done, but I do know just so we get ten feet higher water than we had in 1927 it would be plenty. It don't make any difference how it gets in there. (Fol. 173.)

This discussion has been going on in this area ever since the Jadwin plan started, I believe.

I am complaining of the same thing that Mr. Kincaid is complaining of. I am about twelve miles north of him. My lands are as high as any of them. I am about 400 yards from the nearest point of the guide levees in this project. I think it passes right through the northeast corner of my place.

Q. You would not have any objection if the Government saw fit to do so to abandon these guide levees?

A. Well, if they are going to give it to us and put it there, give it to the other fellow, too. Whatever is due him, let him have it just like he would let us have it. If you are going to give it to us, give it to the other fellow also. We don't want any advantage over the other fellow, but we don't want him to have any over us. We do not want to know positively that we are going to be overflowed at least every four years. If Mississippi is going to be entirely protected, don't let it come up to Arkansas and then turn it all loose on us every four years. I do not think that is fair.

I reckon I am well acquainted with the Jadwin plan. I have discussed it a lot and read a lot about it and threshed it out as best I could, because everything I had was in that spillway. I am giving my opinion as to its results from what I know personally of this plan. (Fol. 175.)

I value my own property about as much as I ever did, about $75 or $100 an acre. That is what it would take to buy it.

The 1912 flood hit me pretty hard, but not like the 1927. I have had a number of overflows. I think I got them all. (176.)

H. A. BUIE, called for the complainant, testified on direct examination by Mr. Street as follows:

I live in Richland Parish; am engaged in the farming business. My farming interests are about a mile and a half northwest of Rayville on the Boeuf River. It is in what is known as the Boeuf flood way. I have about 235 or 40 acres of cultivated land in that
61 tract. I made a good crop this year. I would consider the land worth $75 to $100 an acre, based upon its productive values. I can not get that much for it now. (Fol. 180.)

There is no demand. There was a demand for land in that vicinity previous to 1928. Land was sold there. None has been sold there since to my knowledge. There have not been any real-estate transfers that I know of in the last two years. I am not in the real-estate business, therefore I am not familiar with it. My land was overflowed in 1927, ninety per cent of it, anywhere from six inches to five feet.

Q. If from 10 to 12 feet of water was added to the height of the 1927 flood, what would be the resulting damage to your property?

A. I would hate to think what it would be. It would be demolished, that is all. (Fol. 181.)

Cross-examination by Mr. MODISETTE:

My land is actually worth $75 to $100 an acre. It belongs to my wife, and she has had it since about 1915. It has not increased much in value since she acquired it. With ten feet increase over the 1927 overflow there would not be much left on this property in the way of houses and fences and improvements and things like that. I know all of the improvements would be destroyed and washed away. I would consider it about as valuable as bateau land out on the Mississippi River. (Fol. 182.)

The people of the parish made a crop in 1927. I have forgotten what it totaled. I don't think it was more than practically half as much as usual, however. They had a fair crop in 1928 and in 1929. I do not know whether there is any demand much for agricultural lands in this country around here.

We don't believe the Government should come along and take our property without paying something for it. I can't speak for anybody but myself, but if they want it they can pay me for it and it will be their property. I would not want to stay there at all. I would not want to continue operating under those conditions. (Fol. 185.)

HARRY JACOBS, called for complainant, testified on direct examination by Mr. Freeman as follows:

Reside at New Orleans; am chief State engineer and president of the board of State engineers. (Fol. 186.)

After leaving school in 1907 I was connected with the United States Steel Corporation at Birmingham for about a year; from

there I went to Central America, where I spent two and a half years doing engineering work. Coming back, I entered into private work for a short time and then became connected with the board of State engineers in 1916 and was so occupied as an assistant to the board until July, 1928, during which time I was located in the Atchatalaya and Pontchartrain districts; also was sent on service throughout the entire State making investigations of river and drainage work. I was appointed on the board of State engineers in 1928 and in September I was made chief of the State board of engineers, which position I now hold.

Q. During the period which you have been engaged with the State board of engineers as an engineer what has been the nature of
62 your work in connection with the control of floods on the Mississippi River?

A. It has been on river work, surveys connected in general with levees and drainage work of the State. (Fol. 191.)

I am familiar with what is known as the Boeuf Basin or outlet plan under the Jadwin plan. Am familiar with the land of R. Foster Kincaid, which is situated between the guide-line levees of the Boeuf flood way in the Jadwin plan. (Fol. 193.)

This property is protected by levees on the south bank of the Arkansas River and on the west bank of the Mississippi, and it has enjoyed that protection since December, 1920, when the Cypress Creek opening was closed. Since the Cypress Creek gap was closed in 1920, the property of Foster Kincaid has not overflowed from the main channel of the Mississippi River. His lands were overflowed in 1927 due to a crevasse on the Arkansas River. (Fol. 194.)

The lands were overflowed in 1912 by the opening of the Cypress Creek gap and crevasse following it. Therefore the entire section with the exception of about one-half an acre where his residence was located was overflowed. His lands were overflowed in 1927 to a depth of approximately four feet. That was from the crevasse in the Arkansas River. The depth of water was approximately four feet at the immediate site of Kincaid's residence, the highest part of his property. If the levees on the south bank of the Arkansas River had held in 1927 and there had been no breaks in any of the levees on the west bank of the Mississippi, his land would not have overflowed. (Fol. 195.) These lands were overflowed by crevasses on the Arkansas River and the opening of Cypress Creek and crevasses on the Mississippi River prior to 1920. If Cypress Creek gap has been closed prior to 1920, Kincaid would not have been overflowed with the exception of crevasses on the Arkansas River or on the Mississippi River.

I am familiar with the plan for flood control known as the Jadwin plan adopted by the Congress under the flood control act of May 15, 1928. (Fol. 196.)

Q. In what manner does the Jadwin flood control project differ from the plan theretofore in effect known as the "levees only" plan?

A. Prior to the discussion of the flood-control plan of August, 1928, the Mississippi River Commission had attempted to control floods on the Mississippi River by building levees at such sections and to such grade as to control floods. After publishing that act of 1928 there were differences in that plan that were approved, first of which was the Birds Point-New Madrid diversion, the Boeuf diversion, the Atchafalaya and the Bonnet Carre spillways, and in designating those as diversions and spillways they abandoned the kind of flood control that the Mississippi River Commission had been relying on in connection with the work since the Mississippi River Commission was created, which, I believe, was about 1879. The purpose of the diversion channels is to divert water from the main stem of the Mississippi River when at flood stage. Under the Jadwin plan there is 2,850,000 second-feet arriving at the vicinity of Arkansas City. The plan takes care of 1,950,000 through the main channel of the Mississippi River, which leaves the remaining 900,000 feet to be taken care of. That goes through the Boeuf flood way after the
63 gauge at Arkansas City reaches 60½, the supposition being that the fuse-plug levee will crevasse pouring 900,000 feet into the Boeuf Basin. I am taking the year 1927 into consideration in arriving at the 900,000 diverted water from the main river to the Boeuf diversion channel. As there as 2,850,000 running through the Mississippi River, leaving this 900,000 feet to be taken care of in that vicinity, the Jadwin plan calls for a raising and enlarging of the existing levee line above what is known as or called the fuse plug above Cypress Creek and below Luna Landing; that stretch of land is designated as the fuse-plug levee and was to remain at present grade and section, which grade is 60½. (Fol. 198.)

By building two million eight hundred and fifty thousand second-feet at the head of this stretch, it is proposed that a million nine hundred thousand would be taken care of by the main channel itself, leaving 900,000 to be taken care of by spilling it through a crevasse at this levee and dumping that 900,000 second-feet through the Boeuf floodway between guide-line levees that are approximately from ten to twenty-two miles apart.

Q. You have testified that prior to the Cypress Creek gap in 1920 no flood waters passed through the Boeuf Basin channel from the main river. If under the Jadwin plan 900,000 second-feet of water is passed down this Boeuf diversion channel, from what stream does that water flow?

A. From the main stream of the Mississippi.

Q. To what extent would plaintiff's land herein have been overflowed in 1927 if the Jadwin plan had been in effect and all levees holding?

A. There would have been no water over plaintiff's land in 1927 if the Jadwin plan had been in effect as outlined during the 1927 water.

Q. Are you assuming that the fuse plug would hold? Let me see if you understand my question. To what extent would plaintiff's

land herein have been overflowed in 1927 if the Jadwin plan had been in effect and all of the levees held?

A. Oh, there would have been four feet of water over the Kincaid property under the Jadwin plan if the 1927 water had been in effect.

Q. Would that have been true if the fuse plug did not hold or would not work?

A. That would have been—the 1927 water under the Jadwin plan as intended and with the 1927 water it would have been—it would have crevassed the fuse plug, sending over 900,000 feet down through the Boeuf Basin and placing better than twelve feet of water over the Kincaid property. I see the difference now, but the way you asked the question at first it was so much like the other question that I did not understand it.

Q. Assuming now that all of the levees held and the Jadwin plan was in effect and diverting this water through the Boeuf Basin diversion channel?

A. Yes, sir.

Q. If water confined in the diversion channel such as contemplated in the Jadwin plan in the Boeuf Basin diversion channel should put about sixteen feet of flood water over Kincaid's property, would that flood water be disastrous?

64 A. Yes; it would be. That much water coming down through the Boeuf Basin would destroy all of Kincaid's buildings. As the water started rising over his property it would be through wind action and water action against these buildings which would tear them down.

And that would be true as to fourteen feet of water and as to twelve feet and as to ten feet.

During the 1927 water, with less water than that, in several parts of the State of Louisiana all buildings were washed away, completely wrecked and busted up. I would state that that happened in several parts of the State as shown by pictures that we have on file in our office. Over 40 houses on one section of Bayou de Glaices were completely wiped out. These levees were a good deal similar in height than the levees would be at the Cypress Creek fuse-plug section. Also in the Port Barre section levees from 8 to 10 feet of water got out and the buildings were all destroyed. (Fol. 201.)

I don't believe the Kincaid property would be benefited by any amount of water that would go through the Boeuf diversion. It is 120 miles below the fuse-plug section, and that water passing between guide line levees through trash would deposit the silt before getting to the property. In fact I would rather state that the water after getting to the Kincaid property and remaining there for 25 or 30 days would have accumulated a certain amount of decayed vegetation and matters which, if allowed left standing on the place, would be a detriment to the land rather than a benefit. (Fol. 202.)

I would consider water of four feet in depth and more, for 30 days or more destructive of properties and buildings and land, depending

upon the time of the year. The buildings would be subject to damage regardless of the time of the year that the water was over them. Approximately 500,000 second-feet of Mississippi River water flowed through the Mounds crevasse in the State of Mississippi in 1927. Under the Jadwin plan there would be no water flowing through that State. (Fol. 203.) That 500,000 second-feet that went over the Mounds crevasse into the State of Mississippi would be poured out of the main channel of the Mississippi River to make up the 900,000 feet that would be diverted through the Boeuf floodway.

The construction of the Luna Arkansas Eudora Levee will cut off any possible waters going through the Tensas that have gone through there before. The largest amount that went through the Tensas and the Boeuf was 600,000 feet, of which there was about 150,000 feet that went through the Tensas and 450,000 feet, approximately, that went through the Boeuf, and the construction of the Luna Levee would force that extra one-fourth through the Boeuf Basin. (Fol. 204.)

It would not be necessary for the Government to take any further action whatever to put into execution the Jadwin plan in the Boeuf floodway other than the construction of the guide-line levees.

There is no difference between the Boeuf diversion and the Bonnett Carre except in the manner in which the diversion is made from the Mississippi River; in the former the water will be spilled into the Boeuf diversion through a controlled fuse-plug section of the levee and through the Bonnett Carre through a controlled spillway. Neither the property owners in the Boeuf floodway or in the Bonnett Carre floodway will be benefitted by the diversion of water from the Mississippi River under the Jadwin plan. They will be damaged. The lands in the Bonnett Carre floodway will be damaged by the wash of the lands that have been under cultivation, possibly three or four inches of top soil being washed off, and the buildings wiped away. The same applies to the Boeuf floodway. (Fol. 205.)

The Kincaid property is not in a pocket according to elevations run and checked from a point at Winnsboro and running across there in several places. The property shows that it is about the same elevation as other stretches of land around Winnsboro and from the surveys that have been made from the guide-line levees on the east side. The water-level grade determined by the Government as being the guide-line levee on the Kincaid property—under the Jadwin plan is given as between 83 and 84 feet mean Gulf level.

Q. Where now would the elevation of the guide-line levee there indicate what water elevation was expected under the operation of the Jadwin plan?

A. It would be approximately sixteen feet of water intended to be placed there by the Jadwin plan by designating the grades of that intended levee as relates to the Kincaid property. It is approximately sixteen feet of water over his property if and when the fuse-plug

levee breaks and dumps the water down there under the proposed Jadwin plan. (Fol. 208.)

Cross-examination by Harry Jacobs, By Mr. MODISETTE:

Q. You say that the 900,000 second-feet will be taken from the Mississippi River, and your witness, or witness on the same side, Mr. Kemper, stated that this fuse plug would have the—would take the path of the water—would have the back of the Arkansas River water against it and cause a wall of water to come down the Boeuf Basin. Now I want to know from you whether this water is coming down as described by you or Mr. Kemper is Arkansas River water or Mississippi River water?

A. I have made no attempt to make any such picture as any wall of water. I have not referred to any wall of water yet.

I can not answer for Mr. Kemper. I will answer as to what I think will take effect when the fuse-plug section crevasses, but I can not speak for what anyone else thinks. Without referring to Mr. Kemper's testimony at all, I would state with the head of water against the fuse plug, when it reaches a stage of 60½, that when that water begins to run over the top of the fuse-plug levee it may run over—I have seen it run two or three days over the top of a levee before the crevasse occurred. It might rise over 3.4 feet and wash—there usually will be a certain amount of wash of dirt causing a caving of that section, and the result would depend as to what depth the crevasse is and as to the slope as it is undergoing that change. I do not believe I have said anywhere in my testimony anything about a big wall of water, and I have never seen a big wall of water coming from them. I have studied it and have seen water creep up in ditches ahead of the crevasse and creep up after it had mounted and gotten its head: then it went probably with considerable velocity, but that depends a great deal on the manner in which the crevasse takes
66 place. The crevasse will be caused by the Mississippi River water because the Mississippi River water is against the fuse-plug section. I do not want to make any reference at all in my answer to Mr. Kemper's testimony. (Fol. 210.)

Q. You and Mr. Kemper being produced by the complainant as experts and testifying on the same side of the case, the Government would like to know if there is any difference in your opinion as to these results.

A. That would be left, I would judge, to the conclusion of the courts. Mr. Kemper has made his statement as to what he thinks would take place. I have tried to show you what I think will take place, and I would rather not make any statement based upon Mr. Kemper's testimony. In other words, I would rather be entirely free from any other witness and make my own statement from my own personal opinion. (Fol. 211.)

I know that all except about half an acre of the Kincaid property was overflowed in 1912 by levels and elevations run there and I have taken the points that were pointed out by people who lived

there and knew the property. I was not there. The elevation of the high water at Kincaid's property in 1912 was 66.9, about the same elevation as the ground level. That was a small portion pointed out as being the only part that was out. (Fol. 213.)

I believe the carrying capacity of the Atchafalaya River is changing. After taking the 1916 water section and running across on records prepared by the Mississippi River Commission, and then these same sections having been run after the 1927 flood shows there has been a considerable increase in that section. I have not seen the section of the 1929 water. (Fol. 215.)

There is no such levee at New Orleans as a fuse plug. The only levees in the State of Louisiana that are designated as fuse plugs are at the head of the Boeuf Basin and at the head of the Atchafalaya River.

There have been several sections of back-water levees built in the Atchafalaya Basin. These levees by protecting certain lands cause a somewhat higher water level on other lands. The backwater levees in the Atchafalaya do no damage to any lands either above or below, as they are only short stretches and have never been completed. They serve the purpose of protection. (Fol. 220.)

There have been breaks in the Arkansas since 1920. In 1927 they had a break. Kincaid was not overflowed from Mississippi water since the closing of the Cypress Creek gap.

Q. What about the crevasse in 1922 that was opposite Vidalia, Louisiana?

A. You mean the crevasse about three miles below Vidalia in 1922, when the water went over the Tensas and backed up there? (Fol. 225.)

Q. Yes. You knew about the crevasse in 1922 when the water went through the Tensas and backed up to such a stage that it filled that basin so full it covered property approximately thirty miles above there?

A. Yes. I see no way for the '22 water to reach Kincaid.

Q. Well, if the crevasse hadn't existed would the water have backed up on him that year or reached him at all?

67 A. The water would have backed up on him from the backwater area. He was partly overflowed from the backwater which was made up of Red River, Ouachita, and other rivers.

There were crevasses in 1927 at Winder and Cabin Teele, but as to their effect I don't know. I have not checked up what results would be on his property of waters through the crevasses. (Fol. 227.)

The flow of 1927 at the Arkansas City gauge was approximately two million seven hundred thousand feet. Those figures were obtained from the Mississippi River Commission discharge tables, published, I think, in 1928. I understand that the United States Government measured the flow in 1927 at a good many places. My testimony shows that the 1927 flow was some less than the maximum

predicted under the adopted plan of two million eight hundred and fifty thousand second-feet at Arkansas City gauge of 60½—about one hundred and fifty thousand feet less. The maximum predicted under the adopted plan is supposed to be approximately twenty-five per cent greater than the 1927 flood.

Under the Jadwin plan it was two million eight hundred and fifty thousand feet, which was the maximum flow of water at Arkansas City, and by taking the 1927 water I find approximately two million seven hundred thousand feet at the same point. The difference is not twenty-five per cent. The differences between that and two million eight hundred and fifty thousand feet would be about one hundred and fifty thousand feet. I have stated that I agreed with the adopted plan and the figures given that the maximum predicted flood would be two million eight hundred and fifty thousand second-feet at Arkansas City gauge, which was twenty-five per cent over and above the 1927 flood flow.

Q. All right, then, by the process of deduction you can take one-fifth of two million eight hundred and fifty thousand feet from it, leaving you two million two hundred and eighty thousand feet, which will give you approximately, for instance, the flow feet of 1927 flood, won't it? I am not trying to trap you; I am asking the question, and if you understand me I think you will agree with me.

A. Approximately that; yes, sir. (Fol. 233.)

At the Mounds Landing crevasse in 1927 the discharge was approximately five hundred thousand second-feet. That is across the river in Mississippi. Those figures are taken from the records of the Mississippi River Commission. I did not measure it myself. No one else measured it so far as I know. As an engineer I believe those figures to be approximately correct.

Q. How do you know it is? On what do you base your belief that it is correct?

A. Based on—it is quoted by the Mississippi River Commission in discussion.

Q. Where is the quotation from the Mississippi River Commission?

A. General talk at all times.

Q. Well, to be specific about it, where did you get that quotation from the Mississippi River Commission and who quoted it and where and when?

A. I don't remember just—but it would not be a hard matter to check up in the records and find out.

68 Q. Well, are you sure that it is a Mississippi River Commission statement of a fact?

A. I believe that I said that it is generally accepted by everyone speaking of it, referred to it, as being approximately five hundred thousand feet. (Fol. 235.)

The plaintiff thereupon rested and the following evidence was then offered and adduced on behalf of the defendants.

Mr. MODISETTE. Your honor, I haven't been agreeing with all the parties interested in reference to just what is the necessary procedure

to preserve the record; and to satisfy the district attorney, his view about it, we are going at this time to call again to the court's attention our motion to dismiss and ask you to rerule on that question before the Government puts in its evidence on the merits, in order to, as I understand the United States attorney, to protect the rights. In my view about it I don't think it is necessary, and I think we have got the rights preserved already, but it is to satisfy the United States attorney's feelings about it and his views of what ought to be done that I would like to have the court do that.

The COURT. I don't think it is necessary, but it may be done at this time. The motion to dismiss may be urged at this time and it may be overruled. This is really an equity case, and of course motions for instructed verdict are not in order, and that is in the nature of the request which is being made now.

Now, you may, before proceeding upon your own evidence, do so with full reservations of all issues which you have raised in the past.

Mr. MODISETTE. The defendants except to the ruling of the court and reserve the benefit of the motion to dismiss, and with those reservations offer the evidence on the merits of this case.

Captain JOHN PAUL DEAN, called as a witness on behalf of the defendant, testified on direct examination by Mr. Modisette, as follows:

I live at Washington, District of Columbia; I am a first lieutenant, Corps of Engineers, United States Army, on duty as assistant to resident member of Board of Engineers of Rivers and Harbors and assistant to the resident members of the Mississippi River Commission in Washington, and secretary of the Inter-Oceanic Canal Board. I attended the Worcester Polytechnic Institute, Worcester, Massachusetts, three years, and later graduated from the Military Academy. I graduated at the Massachusetts Institute of Technology as a civil engineer and at the Engineering School of the United States Army in civil engineering. Graduated from West Point in 1918. (Fol. 240.) My major service since I left West Point has been in hydraulics. I was in charge of the preparation of the flood-control project for the Allegheny and Monongahela Rivers and was in charge of various works of improvement and inspector of operations in the Allegheny, Monongahela, and Ohio Rivers and locks and dams. I made special hydraulic investigations in Europe for a period of about five months. I am familiar with the general principles of hydraulics, especially pertaining to flood control, involved in this State. (Fol. 241)

69 [The witness produced a map of the project made by the Mississippi River Commission under the direction of the Secretary of War and the supervision of the Chief of Engineers, U. S. Army, which was used by him in his testimony.]

I am acquainted with the ground shown upon the map, and with the topography of the country also, and the watercourses and the

flood conditions in the Mississippi Valley exhibited thereon. (Fol. 243.) The river in its natural state carries about one million cubic feet per second before it overtops its banks, and that is correct so far as the general situation from Cairo to the head of the Atchafalaya. The levee system was developed gradually prior to the present adopted project, so that at the time of the 1927 flood, in general, the capacity of the river between guide levees through this same stretch was about one and three-quarter million cubic feet per second, rising to about one million cubic feet per second before it can overflow its banks and one and three-quarter million cubic feet without general overflow. The adopted project provides for taking care of the maximum predicted floods possible. The project, as presented by the project document, is based upon stages rather than upon discharges. (Fol. 244.) It is a generally recognized fact that there is a certain amount of variation from time to time between stages and discharges. Roughly, the project in the vicinity of Arkansas City is designed to take care of about two million cubic feet per second. It is designed to guard against a flood which would produce a seventy-four and one-half foot stage at Arkansas City. It provides for construction of a new levee between Birds Point and the vicinity of New Madrid, and raising of levees above and below, and retaining this levee at its present grade and section, as approved by the present executive orders, and when flowage rights are obtained—that is, between the existing levee and the back levee to a sufficient extent—the original project document contemplates the lowering of the levee for a section near the northern end to permit water to enter these lands at lower stages than it would now enter. The levees are to be raised wherever the double line is shown on the map [referring to the map on the wall]. They will be raised about three feet. At the beginning, or head of the Boeuf Basin, it is contemplated to raise the levees on the south bank of the Arkansas River, and to raise the levees south of Luna Landing, and to raise the levees on the opposite side of the river, and to construct from a point in the vicinity of Cypress Creek a levee down to high ground in the Bastrop Hills, south of Collinston; to construct a loop levee beginning on the high ground northeast of Monroe and coming around and joining high ground again about a mile or so away; to construct, on the east side, a ring around Arkansas City; a levee from the vicinity of Luna Landing down to high ground north of Eudora and a little south of Chicot, and again to start the levee from high ground a little south of the Arkansas-Louisiana line approximately on the line shown around Rayville, and down to a point a little south of Wisner, and there tie back to the high ground. (Fol. 245, 246.) It is expected that when the adopted project is completed that most of the lands shown in green on the map will no longer be subject to overflow, barring unforeseen accidents to the levee. The uncolored areas are lands sufficiently high so there is no prospect of overflow. The lands in blue are the lands which were actually overflowed in 1929. 1929 had no levee breaks, so that all of this can be

described as backwater of the Mississippi River in flood, under the conditions of the adopted project, or under normal conditions. (Fol. 246, 247.) In natural conditions, and under the conditions which have always occurred, great floods have always overtopped levees in the main line, or along the south bank of the Arkansas River, and all have come down through the Boeuf side of the Tensas Basin, with the exception of crevasses, low down at the back of the ridge (separating the Tensas and Boeuf Basins). In case waters have broken through crevasses in the main-line levees south of the end of this ridge, they have gone down into the backwater area and have increased the supply of backwater and have forced the backwater up into the Boeuf Valley from behind. This ridge is commonly called the Macon Ridge from its head near Chicot to its end near Sicily Island. The saddle near the lower end between Wisner and Sicily Island is generally known as the Deer Creek Gap. Through this gap flows a small stream—Deer Creek into the Boeuf River near its mouth. Floods in the past have broken through from the east across the ridge and down into the Boeuf Valley, or, in rare cases where there have been no crevasses to the eastern side, and there have been crevasses which carried large amounts of water to the western side toward the east. The gaps between the hills toward the west around Harrisonburg and the lower end of the Macon Ridge, coupled with this Sicily Island high land in the middle, form the outlet for such water as may come into the Boeuf Basin. This overflow ultimately reaches the Gulf of Mexico and will immediately get into the Red backwater basin, which is colored in blue on the map. The deep portion of the valley is relatively narrow at this point. It is largely obstructed by Sicily Island, yet the 1927 flood flowed through this gap between Sicily Island and the lower end of Macon Ridge. In its natural condition the river has always broken over the levees wherever there was an extraordinary flow at some point. The 1929 flood is the only flood—certainly the largest one—that has ever gone through the Mississippi without a break. The levees have always afforded unequal protection to different lands. They have broken in their weakest spot. (Fol. 249.) There have been crevasses scattered almost through the valley in the course of years. All of these crevasses represent the weakest point at a particular time. The essence of the adopted project is, that while the levee system as it was found in 1927 was only constructed in general to take care of one and three-quarter million cubic feet of flood properly, and with the possibility of ultimate floods in excess of two and three-quarter million in the vicinity of Arkansas City and three million below that there would have to be nearly one million cubic feet per second additional capacity provided if the valley were to be ultimately protected. (Fol. 250.) Under the conditions as they existed at the time the project was adopted, whenever a flood in excess of the carrying capacity of the river at the crest of the levees, if the river was at the crest of the levees, the levees were bound to be overtopped and go out, and the excess water was bound to escape and go somewhere

71 The amount of water which would escape in any given case was unknown, depending upon several factors, the principal one being the amount of water coming in on such particular flood which served to maintain such a head above and the head of waters below—that is, the slope between the waters above and the waters below. If additional waters come in, or if for any other reason the upper pool rises, it automatically tends to force more water out. A tendency to decrease the height of the lower pool into which the water flows tends to increase the slope and to make more water run out, and vice versa. Anything which tends to restrain water from getting out tends to retard the get-away of water and build up the counterhead more rapidly and to a greater extent than would be the case were this obstruction not present. (Fol. 251.) The guide levees come in that category and form obstructions to the passage of the water, tending to prevent it from spreading, and there is formed what is commonly known as a bottle neck which builds up a counterhead in excess of what you would have had without their presence, and this tends to decrease the amount of water leaving the main river. These levees that are built here [indicating] are built for the purpose of protecting the lands behind them, not to guide the waters to any particular places. The water pass naturally, as they have always passed, down through the natural Boeuf Basin. Without the guide levees the waters would pass down the Boeuf Basin as they pass down the guide levees in existence, except that such waters come in up in here [indicating], and it is probable that some of the water which we think will be present will go down here [indicating], and would, without this levee protecting this valley, pass down here [indicating]—that is, the Macon and Tensas Valleys. (Fol. 252.)

The COURT. What point have you reference to with respect to the levee that prevents the flood rising?

A. A break in the levee lines—in fact, most large breaks in the levee lines from the vicinity of Luna Landing to the vicinity of Cypress Creek, without the presence of this levee between Luna Landing and the highlands in the vicinity of Chicot—would probably let in water which would pass in both directions. Additional water would in that case come in there, in the absence of the levee, and come down Macon Basin. Whatever water comes through there, in the absence of the levee, increases the head, and in such a way as to permit additional water to come in there. Conversely, the presence of the levee prevents water from coming in which would otherwise come in from the river were it not present. All of the levees, with the exception of the levee between Luna Landing and the vicinity of Chicot, would have no effect on the passage of the waters through the valley. They would, without those levees, spread so as to overflow the lands behind them between the ridges and the existing levee, but with respect to property such as Mr. Kincaid's located at this point [indicating] they would have absolutely no effect.

Each restraining influence has two tendencies: One is to raise the depth above it for a given quantity of water; the other tendency is by virtue of that raising of the depth to decrease the quantity of water. Levees upstream from a given point have no effect whatsoever on the depth at that point. They may have some effect in restraining the entrance of water, but they have absolutely no effect otherwise on increasing or decreasing the depth at points
72 below. (Fol. 254.) You always have to work a backwater curve from the bottom up, downstream toward upstream. The result of this is that under no circumstances can levees to the north or upstream of Mr. Kincaid's property within the State of Louisiana be considered as having any effect on raising Mr. Kincaid's water levels, due to restricted channels, but rather would slightly tend to decrease the water levels on Mr. Kincaid's property, due to their restraining influence on the entrance of waters from outside of the State of Louisiana. There is no possibility of escape; all water has to converge to this point.

In working out the probability of floods I considered every scrap of available data as to past floods. (Fol. 254.) I believe that I have used every scrap of evidence as to the floods of the Mississippi so far as the probability of their occurring could be expected on streams such as the Mississippi, based on experience of other streams throughout the world, and my conclusion from that study, and the studies made by others, is that the probability of getting a flood stage which would overtop the fuse plug between Cypress Creek and Arkansas City if the stage point is 60½ at Arkansas City would be about thirteen years. The Chief of Engineers and some of his officers wishing to be conservatives, and possibly also a bit superstitious, changed the figure to twelve years and stated that the probability, or probable frequency, of overtopping and of waters continuing to pass through the Boeuf Basin would be once in twelve years. (Fol. 255, 256.) I wish to emphasize the fact that every scrap of available evidence was used and all of the different methods of arriving at a conclusion were used, using only reliable evidence that we had, and then taking into consideration evidence that was somewhat less reliable, giving certain weight to it, using the stages, using the discharges, in fact every known method was used and checked and rechecked until finally they were found to be all in substantial agreement.

Wishing to be conservative, we have based our program on the overflow as frequently as there was any reasonable expectancy of it so doing. There is nothing to indicate an average overflow more frequently than once in thirteen years.

Q. Mr. Dean, will additional water leave the river by reason of the adopted project?

A. No; less water will leave the river.

The area behind the levees is restricted in its get-away ability, and backwater is quickly forced behind the waters to raise that lower pool of tail-water and build up a counterhead which will restrict

the crevasse from enlarging anywhere near as rapidly as it would otherwise. With the levees as they exist at the present time, and a mighty flood coming down the river, all levees in the wider district areas might overtop at almost exactly the same time. For instance in 1927, on the very same day—April 21, as I recall it—the crevasse at Mounds Landing happened, and at almost the same hour there were crevasses up at Pendleton and Medford, and perhaps one other place going on on opposite sides of the river. (Fol. 258.) The result of that was that the water had a free get-away from both places and both sides, and the crevasses widened rapidly, because the water had a rapid outlet, and indeed was so free that the river fell nearly six feet in two days, and that in spite of the fact that you have this enormous backwater pool up here through a basin of around 1,200 square miles—that is, three-fourths of a million acres—and when you did that in a day you got down 375,000 cubic feet additional water from out of the main stream. But under the present plan the get-away capacity of the water will not be anything like so large. The outlet capacity of the river was greatly reduced. It is estimated that it was lessened by 60,000 feet a second per foot due to the fact that the river dropped when it was at normal flow. The tendency of a crevasse is to reduce the slope below because it reduces stages immediately, and to check the velocity by reducing the slope. The tendency of the crevasse was to make the increment per foot ever greater than 60,000 cubic feet per second. (Fol. 259.) The converse holds true in the matter of inflow to the area. After this pool created by the backwater is drawn down, that of the Mississippi, White, and Arkansas Rivers, twelve hundred square miles in area and all controlled practically as to levels by the bottle neck, the entire section of the river would be lower in the vicinity of Arkansas City, as after this pool is drawn down then the slopes increase from the tributaries to the pool, and the velocity of the water is accelerated toward that pool, and there is a tendency to draw out from these tributaries an unusually large amount of water—that is, more than would normally come into the pool in a given time to replace that which has hastily passed out from the backwater pool—so that under normal conditions, with the widely distributed crevasses which occurred in 1927, and no restriction behind these crevasses, and with the open crevasses occurring almost simultaneously, that increased the flow and permitted vastly greater quantities of water to leave the main river than would be the case with the proposed project working efficiently. Under the project as proposed and adopted there will be no possibility of crevasses on the Mississippi side; there will be no possibility of crevasses on the Arkansas; there will be a possibility of a crevasse over a relatively small section of levee, and that only at the same stage at which all levees were formerly overtopped. When the water does overtop this short section of levee, the tail water, the pool of water immediately behind the levee, if crevassed, will rapidly

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build up a counterhead by reason of the restricting influence of the protection levees, and this counterhead prevents a widening of the crevasse at anywhere near the rate that it would otherwise widen and serves to take out just the amount of overflow of water to offset the overflow that is developed, or is developing, in the main stream. If the proposed conditions are worked out with efficiency, then the inflow does not continue to rise, and there will be no widening of the crevasse at all. (Fol. 261.) There is not the slightest doubt but what less water will pass from the main river by reason of the adopted project.

The side levees in Louisiana can only have a tendency to decrease the amount of water coming on Mr. Kincaid's property by restricting the amount of water passing into Louisiana by the head being reduced. It is impossible for water to escape laterally from the Boeuf Valley. It is manifest you will get less water on Mr.
74 Kincaid's property by virtue of the presence of the guide levees in Louisiana. (Fol. 262.)

Q. Captain, have you ever seen a crevasse yourself?

A. I have not in the Mississippi River. I have seen, however, numerous pictures of crevasses and have interviewed everybody that I could find on the subject, have examined everything in the way of records that has ever been taken anywhere in the matter and have studied them carefully from models, and have thoroughly studied the hydraulics of the matter, which are not particularly complex so far as the true hydraulics are concerned, and think I can describe it.

Q. In your opinion as an expert hydraulic engineer is it possible for a wall of water to go down the Boeuf Basin under the adopted plan?

A. Absolutely impossible.

Even without any restricting influence, just the friction on the bottom of the channel there—the vegetation and other physical obstacles caught in the bottom of the channel, and such things as that in the path of flow, build up a counterhead quite rapidly, so that you always in a crevasse are bound to get considerable checking effect which makes the slope accommodate itself to the quantity passing through; or your quantity accommodates itself to that slope. These factors working together soon tend to slow up the velocity of the crevasse water to only one-half a mile an hour.

Q. Captain Dean, where this water comes through the crevasse, or where the levee crevasses, it comes through with a tremendous force. What becomes of that force?

A. It is all absorbed in the first few hundred yards or so, because under the bottom the friction of the water creates a heat and warms the water. (Fol. 263.) As slope changes the velocity changes and the corresponding stream decreases. In other words, the only way you can carry your energy along with the stream of water where you have a changing depth or velocity is to have a very carefully prepared channel made so as to force it to work under the greatest

type of efficiency for such specific purposes. In fact, there is no way of losing energy any faster than to let water overflow in a pool behind it. (Fol. 264.) I have all of the records of the gauge reports of 1927 and found the maximum rate of rise at any point at any time, say, in a twelve-hour period, to be 2.8 feet, which corresponds to 2.8 inches per hour. That is absolutely the maximum rise for any period. The rise through the course of that day, which included that twelve hours, was corresponding to two inches per hour, and over the period of the total substantial rise it was at a much slower rate. In any case, the rate of rise is very slow, and the rate of overflow is extremely slow.

Down at Mr. Kincaid's property the rate of rise would be almost imperceptible under any conceivable circumstances, because long before the inflow came down there through the Boeuf Valley from crevasse waters, water would already be on the property below, and the total rise would be only a matter of a few feet, and that would be distributed over a long time. The records of 1927 very clearly substantiate that. The records taken at Winnsboro, and other records, clearly show that when you get down into the lower area there the rate of rise is very slow. All of the records substantiate the
75 opinion that I am now expressing. (Fol. 265.) I have been on the Kincaid property, and I am familiar with the physical conditions there.

The carrying capacity of the Mississippi River is very materially improving. I think this is largely because of the revetment work, which prevents caving banks which in turn deposit their dirt into the stream. The progress of the revetment work will certainly do a great deal to prevent this. The revetment program is the most tremendous provided by the United States Government in any project about which I have any knowledge. This project provides for eighty million dollars of revetment work; over one-fourth of the entire project goes into revetment work alone, and that is certainly going to materially improve the carrying capacity of the river. (Fol. 266.)

Cross-examination of Captain Dean, by Mr. RUSSELL:

I was assigned to the work of studying the flood control of the Mississippi River during the 1927 flood. At the time of the occurrence of that flood I was assistant to the district engineer at Pittsburgh in charge of the flood-control survey on the Allegheny and Monongahela Rivers. (Fol. 267.) I did not come down to the Mississippi River Valley until March, 1928. My duties prior to March, 1928, were primarily with the reservoir board and not with the general preparation of the project. (Fol. 268.)

Q. I believe you have testified, Captain, that the building of the levees has produced higher stages in the river, in the main river, than existed heretofore?

A. No question about it.

Q. And that the future building of levees by the raising of levees, as provided by the project, will thereafter produce even higher stages?

A. That is quite true, the possible stages, if the water comes. The building of the levees themselves will not produce the stages, but in case the flood comes or a flood comes that would otherwise overtop the levees, then the stages would be increased by the presence of the levees. The adopted project recognizes the fact that water will pass out of the channel when a flood comes along which overtops the levee. This is perfectly obvious to anyone. The adopted project then goes further in that it attempts to offer as much protection as possible to land values when that overflow does take place, and it also attempts to keep in the main river as long as possible all of the water that it is possible to be carried through the main river levees. (Fol. 270.) That is the most important point—that under existing conditions when the water is overtopping the levees it has overtopped them wider and has drawn down the river, so that it has reduced the carrying capacity of the river by making hydraulic efficiency poorer, and by reducing its slope beyond the point of proper efficiency, and that in the future the water will stay at higher stages longer in the main river, and the main river will carry out that water more efficiently.

Q. And particularly in the vicinity of Cypress Creek it will break up the fuse-plug levee and divert that water down the Boeuf Basin, causing it to be diverted from the main channel?

76 A. It is certainly one of the effects that will be made in carrying out the project that if and when floods come that will raise the main river stage higher than the existing levee, the fuse-plug levee, that it will overtop this levee; and it is also certain, as nearly as anything can be humanly certain, that if such waters can be passed out from the main river in a smaller quantity of water than would otherwise pass out it will build up the carrying capacity of the river. (Fol. 271.) The idea of the plan is to use the river to its maximum capacity to prevent crevasses in the main river levees and to give to the lands behind the river the greatest possible protection. The water which will pass out of the main river over the Cypress Creek fuse-plug levee is whatever water may come in excess of what can be carried out at the highest safe carrying capacity, one foot freeboard on the levees below. The plan is based on a stage rather than upon a discharge. The stage of the superflood which was estimated if confined is the stage of seventy-four and one-half feet at Arkansas City. That has been estimated for the purposes of hydraulic calculations to amount to two million eight hundred and fifty thousand cubic second-feet. (Fol. 272.)

Q. Yes; then would that two million eight hundred and fifty thousand cubic feet per second there to be dealt with in the maximum flood, how much of that two million eight hundred and fifty thousand cubic feet will the operation of the proposed diversion divert through this fuse plug at Cypress Creek?

A. The project will permit all above whatever the carrying capacity the river may have at that time to flow into the Boeuf Basin.

Q. Now, what is that carrying capacity?

A. The carrying capacity of the river at some future time is absolutely unknown. As I say, the river has been improving its hydraulic efficiency materially. That at the present time, if you wish to know——

Q. No, sir; we are still talking about this two million eight hundred and fifty thousand cubic feet per second which you say will be there to be dealt with in the event of this maximum flood. Is it not a fact that the plan contemplates diverting from this two million eight hundred and fifty thousand cubic second-feet through the Cypress Creek fuse plug and down the Boeuf floodway an amount of from nine hundred thousand to one million two hundred and fifty thousand cubic feet per second? (Fol. 273.)

Mr. Modisette says, "If the court please, I think the witness should be permitted to give present hydraulic capacity of the river if he wants to give it."

The COURT. He can do that, Mr. Modisette, when he answers the question. Counsel did not ask for that in his question and he is entitled to put a certain question and receive a certain answer, and then if the witness desires to he can make any explanation he sees fit.

Mr. MODISETTE. Then I do not believe the figures given in counsel's question are just the figures given by the witness.

The COURT. He has asked the witness a question based upon certain figures. Now, whether those figures are correct or incorrect, it makes no difference. The witness certainly should know what the correct figures are, and if he stated the incorrect figures the witness
77 has the right to answer the question by giving the correct one. He is not bound by the figures given in the question, and he may say yes or no to the question that is asked and then explain if he wishes.

Just answer the question according to what you know about it. You do not have to say what he says is correct.

A. The project contemplated was based on gauges and headways averaged for the purpose of working out a table of averages for the purpose of comparison with other basis equivalent as to contemplated future necessities on future gauge readings and readings and discharges. It is a generally recognized fact that equivalents change according to conditions. The efficiency of the project is to take more water as the headway increases—that is, based on the past readings.

Mr. RUSSELL. If the court please, I submit that that answer is not responsive to the question.

The COURT. No; he has asked the question if the project does not contemplate a diversion of a certain quantity of water and has given you certain figures and facts as being true. If you know that fact to be true, say so, or if they are not true, say so. Try to answer the question and then you may give an explanation, reasonable explana-

tion, that you see fit in connection therewith. It is either a correct statement or it is not correct. It is up to you to say which.

A. No; it does not as so stated. It does, however, if I may be permitted to resume, assume that at a stage of 74.8 or 74.5 headway, it is assumed to be approximately two million eight hundred and fifty thousand cubic feet per second to be passed, and the capacity of the main channel as conditions existed at that time was assumed to be 62½ feet, and there would be approximately nine hundred thousand cubic feet per second difference between two million eight hundred and fifty thousand cubic feet and one million nine hundred and fifty thousand, being nine hundred thousand cubic feet per second. (Fol. 275.) The project contemplates the building of the side levees so as to give as adequate protection to the lands adjacent to them as is given to the land bordering on the main river levee. After considering every conceivable situation, the grade line was found to be, due to the fundamental thing that you can not get away from, the upper pool level of the water at the Arkansas and the lower pool level of the water of the Red back water, approximately the equivalent of the flow line which would be taken through that section by 1,250,000 cubic feet per second uniform flow.

Q. And therefore the stretch is between nine thousand cubic feet and one million two hundred and fifty thousand cubic feet—somewhere in there is the amount of water which will be diverted in the event of a maximum flood through the Cypress Creek fuse-plug levee and comes down through the Boeuf Basin?

A. That is the amount that is contemplated might under certain circumstances pass through there.

Q. And the fuse-plug levee is left at its present height while the other levees are raised in order to make certain of the fact that in the event of such a flood they will hold, and the water will pass through or over and go down the Boeuf Basin?

A. It is not for that purpose. It is for the purpose of passing whatever water may come in excess of the capacity of the main river at that time, which may or may not be one million two hundred and fifty thousand cubic feet per second.

78 Q. But whatever water may come will be nine hundred and fifty thousand to one million two hundred and fifty thousand cubic feet per second?

A. It may be.

I can not state definitely what was the maximum flow of water through the Boeuf Basin during the flood of 1912. Measurements were taken, however. (Fol. 277.) I do not know offhand what the maximum overflow through the Boeuf Basin was during the overflow of 1913.

Q. It is at the bottom of page 317 of the book that you have in your hand. Let me ask you if it is not a fact that it is stated to be one hundred and thirty-seven thousand seven hundred and thirty-seven second-feet?

A. That is correct. I would judge from the record that one hundred and thirty-seven thousand seven hundred and thirty-seven cubic feet per second was the combined flow down both the Boeuf and Tensas Basins in 1913. The record states that the maximum combined flow down both the Boeuf and Tensas Basins in 1916 was three hundred and thirty-five thousand eight hundred and fourteen feet.

Q. And that three hundred and thirty-five thousand eight hundred and fourteen feet was the largest amount of water that ever passed down both the Boeuf and Tensas in any recorded overflow prior to 1927?

A. That is apparently the largest measured quantity. (Fol. 279.) The volumes of water that passed down both basins in 1913 and 1916 passed down those basins prior to the closing of the Cypress Creek gap, and when there was no levee at the mouth of Cypress Creek to keep the Mississippi River from going in there. There was no direct overflow down the Boeuf Basin in 1922—no headwater.

Q. Is it not a fact that in 1927 the maximum flow down both the Boeuf and Tensas Basins was six hundred thousand cubic feet per second?

A. There were no direct measurements taken that I recall. However, that estimate has been made, and I know of no reason to believe it seriously in error. There have been questions about it on both sides. It is purely a matter of conjecture of the output, depending on how you figure it. (Fol. 280.)

Q. That is as correct and as well established a figure as either you or I could obtain?

A. I think so.

Q. Of which six hundred thousand cubic feet it has been equally well established that four hundred and fifty thousand feet passed down the Boeuf Basin and one hundred and fifty thousand feet passed down the Tensas Basin?

A. I think that is correct. (Fol. 281.)

Q. Now you testified that the levees that exist from Luna Landing on the Mississippi to the head of Macon Ridge near Eudora, or, as represented by you, the Chicot stretch, holding there, that the overflow water, any overflow water coming down to the head of these two basins which would ordinarily go down the Tensas Basin, might probably go down the Boeuf Basin; was that your testimony?

A. Not exactly; if I may be permitted to explain, I will be glad to do so.

79 Q. Well, let me ask you this question: Is it not a fact that that water would certainly go down the Boeuf Basin?

A. Yes; whatever water comes in will certainly go down the Boeuf Basin.

Q. And that is the purpose of constructing that levee?

A. Yes.

Q. As a part of the levee plan that is outside of the guide-line levees?

A. Yes.

Q. Captain . . . is it not a fact, that if that Luna Eudora Levee is put there, it is put there to accommodate or carry out of the Tensas Basin the water that would otherwise go down through there?

A. Yes.

Q. And send it down through the Boeuf Basin?

A. To protect the Tensas Basin.

Q. And that is the theory on which it is supposed to work?

A. Yes.

Q. The plan is supposed to have that as its purpose?

A. Absolutely; primarily a protection levee, primarily as a protection levee. (Fol. 283.) Whether or not the protection levees are built, the waters will pass down through here without any possibility of escape, in the case of levees in Louisiana, but with the possibility of escaping from Boeuf Basin into the Macon Basin with respect to this Luna-Eudora line.

Q. Since you have touched on that, you made a statement yesterday that these levees were not guide-line levees but were protection levees put there to hold water out of land outside of the basin?

A. Quite true.

Q. Will you please tell me why they have been called by Gen. Jadwin and everybody else in connection with this plan guide-line levees? Where did the term originate?

A. I am sure I can not speak with certainty.

Q. Do you not know?

A. It may have been—if you wish me to surmise——

Q. (Interrupting.) No; I just wish for you to explain the use of the term "guide-line levees" in this plan by all of the people connected with the confection of the plan and explain to me why the plan calls them guide-line levees?

A. I do not know why.

Q. Now you say they were put there to hold water off of the lands outside of these guide-line levees. Is it not just as true that they are also put in there in order to hold water on the lands that are inside the guide levees, thereby keeping it off the land outside of the guide-line levees?

A. Not at all. The hills do that.

Q. But do the hills touch or are the hills throughout the entire area of the guide-line levees and if not how would it be held by them?

A. To protect land between the guide-line levees and the hills on the slope.

Q. Then the guide levees in keeping the water off from the land on the one side does keep it on the land on the other side, doesn't it?

A. Possibly.

Q. Is it just possible or is it certain?

A. I think that is purely a matter of words. Yes; I concede the point.

Q. Any levee in keeping the water off the land on one side does it by keeping it on the land on the other side, does it not?

A. I guess it does.

Q. Well, don't guess about it; don't you know?

A. I think it is possibly true.

Q. You did not guess on direct examination about anything; please don't guess on this examination.

A. The only point I wish to make is that the waters will pass down through here without any possibility of escape, in the case of levees in Louisiana; but with the possibility of escaping from Boeuf Basin into the Macon Basin with respect to this Luna-Eudora line.

Q. You stated on direct examination that none of the guide-line levees had any effect on Foster Kincaid's land. Now just what is the levee, and where does it have effect on Foster Kincaid's land? The one that you were excepting when you stated none in Louisiana—isn't it the Luna-Eudora Levee?

A. I don't recall any which has any material effect as much as the Luna-Eudora Levee as to quantity of water and as to headway.

Q. That then does have a material effect?

A. Yes.

Q. And that was the levee you were hoping to except from considering when you stated yesterday that no guide-line levee in Louisiana had any effect at all. And, of course, the fuse-plug levee, which is a part of the project, certainly has effect on Foster Kincaid's land?

A. It certainly does.

Q. One other question I overlooked in establishing figures on the previous overflow down the Boeuf Basin. The four hundred and fifty thousand second-feet which flowed through the Boeuf Basin in 1927 came from crevasses in the levees on the south bank of the Arkansas River, did they not?

A. Yes, sir.

Q. And not from the main channel of the Mississippi?

A. I think that an academic distinction, but that is true.

Q. It may be an academic distinction, but, unfortunately, the lawmakers in prescribing the law have made that distinction.

A. Yes. I have testified that with the plan in operation it would be impossible to have a wall of water come down the Boeuf Basin. If I had any evidence to show that I was in error, I certainly would have an open mind, but I have a vast abundance of evidence to the contrary. (Fol. 286.)

Q. Now, with the amount of water which you have testified would be diverted at Cypress Creek being diverted from the main channel of the Mississippi over or through the fuse plug and down the Boeuf Valley, state whether or not, or what the effect would be on Foster Kincaid's land?

A. It would get wet.

81 Q. I guess I deserved that one, Captain. Tell me this. Would the Luna-Eudora Levee under those circumstances put

more or less water on Foster Kincaid's land, the fact of it being there?

A. More than what?

Q. More than would go there if the Luna-Eudora Levee weren't going to be where it is going to be?

A. I don't know, but there are tendencies both ways. I believe that more water would go over Mr. Kincaid's property than would if it were not present, but there are plenty of tendencies both ways. My opinion is that more water would go over it by reason of that levee than would go over it without the levee present. (Fol. 287.)

Q. Now then, in any flood could you say with certainty under the present conditions and without the project in operation that water would pass from the main channel down the Boeuf Basin?

A. Only if you define the flood as being higher than the levees at that point.

Q. Well, then, one that is not higher than the levees?

A. One that is not higher would not go down.

Q. That is, you can not say that the levee would not break?

A. Oh, yes; it might break.

Q. Now, then, with the Jadwin plan in operation, with the stage sixty and one-half or sixty-two and one-half feet in the gauge at Arkansas City, you can say with certainty that water from the main channel of the Mississippi River will go down?

A. Quite true.

Q. After that stage is reached?

A. Yes.

Q. That is true, is it not?

A. Yes. After it gets to sixty-two and a half feet in either case it will go down.

Q. Well, after it gets to sixty and a half?

A. Yes.

Q. All right; if it gets to the levee top it will go down in either case?

A. Yes.

Q. Whether the protection levees are there or not?

A. No, sir.

Q. Under the terms of the plan it would go down the Boeuf Basin, whereas under other conditions it might or might not?

A. Yes.

Q. Because the plan is designed to make it go through?

A. Yes; the levees are raised across——

Q. (Interrupting.) They are raised above and below as part of the plan to make it go down the Boeuf Basin when it reaches predetermined stage?

A. Yes.

Q. And that finally would make it come down the Boeuf Basin after it reaches a predetermined stage planned for the protection and benefit of these portions of the alluvial valley outside of the floodway; is that not true?

A. The purpose of the plan is for the purpose—the purpose of these levees and the plan recognizes that it will go down. You used the term "make it." It recognizes the fact that it will. It is a fact that we recognize.

Q. I know, Captain, that the officials of your department do not want to be put in the attitude of making that water do anything.

A. We can't. Water flows downhill. That is all there is to it.

Q. Then how do you hope to control it?

A. By recognizing its physical characteristics. You can not change the laws of nature. The engineer only tries to use those laws. The purpose of the engineer is to use those for the benefit of mankind.

Q. I am not trying to start an argument with you, and I want you to know that I appreciate the fact that you are perfectly satisfied that you known beyond the possibility of a doubt the rules and laws of hydraulics which you have announced. Unfortunately I am afraid that water does not know them.

A. Oh, yes; water knows them better than I do.

Q. And I am trying to get you to testify about facts.

A. All we have to determine is what the laws are. The laws are there and water knows it.

Q. You have admitted that the plan, while it would not make the water do anything, will render certain the fact that at a predetermined stage water from the Mississippi River will pass through this fuse plug and go down the Boeuf Basin?

A. Yes.

The further cross-examination of the witness was conducted by Mr. STREET, as follows:

Q. Captain, I believe I understood you to explain how the protection levees, as you call them—we have been calling them guide levees—on either side of the floodway would prevent the water from coming out through the fuse-plug levee if a break occurs by building a bead below there, filling up, making the basin fill up, and preventing the water from going out of the river into that basin?

A. Yes.

Q. That is, reducing the amount that would come out if it had been going all over the country instead of being confined to this channel?

A. Yes.

Q. Your theory is, then, that you are going to reduce the amount of water that leaves the river when that break occurs by reason of these levees?

A. Yes. (Fol. 292.)

Q. Your plan contemplates taking out all of the excess water from the river that can not be carried by the main channel between these levees; does it not?

A. No—yes, sir.

Q. Now, you have outlined a scheme which will create a second head down there and prevent the water from coming out of the river

as rapidly as it would under the present system, and yet one under your system of hydraulic engineering which will permit all of the water to go out that there is any reasonable expectation of exceeding the main river capacity, up to a million two hundred and fifty thousand cubic feet?

A. Yes.

Q. Then your theory is that regardless of the secondary head that may be found down there, it will, if the river gets to sixty-two
83 and one-half feet at Arkansas City, carry it out at the rate of one million two hundred and fifty thousand cubic feet?

A. That is, one million two hundred and fifty thousand cubic feet per second could go down through there, and the levees would take care of it. The side levees will not break. There is room enough there for that much to go out. The secondary head that comes in there will not prevent that much water going out if the river reaches the stage of sixty-two and one-half feet. (Fol. 293.)

In the event of a major flood, considering the worst possible conditions under the assumption of one million two hundred and fifty thousand cubic feet per second, would be about 82.9 feet above mean Gulf level, and Mr. Kincaid's property at the highest point that was measured by the survey which the Government engineers ran, and from the records that I have, is sixty-six and one-half feet—a difference of 16.4 feet of water in depth at that point.

I can not testify from personal observation what the effect of water going from a crevasse down through a confined channel would have on the ordinary improvements on the lands in this country. I can testify to it from an abundance of collected evidence. (Fol. 294.) I have familiarized myself with the general character of farm improvements in this territory, the kind of houses built, and barns, etc.

Question. I will ask you if putting sixteen and four-tenths feet of water through this channel and over Mr. Kincaid's land would be destructive of the improvements on his place?

Answer. I believe it would.

Question. Then it would be destructive, the flood water which would pass over his place under those conditions?

Answer. I think so.

My recollection is that on April 20, 1927, the day before the flood, the amount of water passing Arkansas City was one million seven hundred and twelve thousand cubic feet. It is probably true that in the next twenty-four hours and up to the date of that break that the White River on the Arkansas side rose more than a foot. (Fol. 295.)

Question. Now, I ask you, in between the time that observation was taken and the time the break occurred there the next day in that twenty-four hours, if it is a fact that the Mississippi River itself at Arkansas City had a rise of 14 inches, what additional amount of water would it be carrying at the time of the break in addition to what it was carrying before?

Answer. May I figure that out?

Question. Yes.

Answer. About seventy thousand cubic feet per second more. (Fol. 297.)

Question. What was the river doing on the 21st at Helena above this crevasse with reference to rise or fall?

Answer. I am not absolutely certain. I am not sure. We have the records here. If you have the records, I am perfectly willing to accept them. It was rising, as a matter of fact.

Question. Well, I know it was rising, and continued to rise for a number of hours.

Answer. Yes, that is my recollection.

84 I believe that the official figures show that there were about twelve hundred square miles of backwater territory up in the White and Arkansas backwater area. The backwater there, presuming it existed in the same quantity as in 1927, when the break occurred in the fuse-plug levee at Cypress Creek, would not have the slightest tendency to force the water through there. The only thing that forces it through is the head. If you had only one foot in there, the pressure would be the same as if there were ten thousand square miles of water behind it. The rising river above the crevasses would have no effect in pushing it through there, except the head. It depends upon the head in both instances. (Fol. 297.)

My recollection is that the average height of the levee line at the fuse-plug section is around twenty feet.

No matter how a break in a levee may occur, I except it would wash out down to the earth or the ground if it runs very long. It is the general acceptation that it does. The time it would take to wash down to the level of the ground would be controlled to some extent by the material entering into the makeup of the levee. If built of light, loamy soil, it would go out much quicker.

The forming of the secondary head by reason of these side levees would tend to fill up and prevent the widening of the crevasses, and this will take place to such an extent as to prevent the crevasses from widening enough to take out the necessary water to make the rest of the river safe.

Question. Then, then what, under your plan, would it take to render this other levee safe?

Answer. If that crevasse did not take out enough it would overtop somewhere else, and crevasse somewhere else. The consequence, I think, would be a series of small crevasses. (Fol. 299.)

Question. Then the water after it formed such a secondary head in there as to prevent the widening of the first crevasse would be left in there until another crevasse should open?

Answer. Yes.

Question. Would the backwater prevent that from widening too?

Answer. Yes.

Question. Then it is your judgment that you would have a series of small crevasses that would eventually let out the amount of water that you desired?

Answer. Yes.

The elevation at Cypress Creek above mean Gulf level is approximately one hundred and sixty feet. The elevation at the city of Monroe is around seventy-five or eighty feet in the highest portions. It drops down to around sixty feet in other portions, and, of course, in the channels or streams it goes below that. (Fol. 300.) The fall to a point at the latitude of Monroe is nearly eighty feet, as I recall it. We would have an eighty-foot fall for this water to maintain. That is, the water surface at both points. That would not come down in the shape of a wall of water. The streams that would come out of the main overflow over the land would tend to spread on each side.

Question. Would the streams within the floodway you are talking about take care of that amount of water, nine hundred thousand
85 second-feet at Cypress Creek, and fill up all of the streams in here?

Answer. It would take about twelve days for the water to fill up the streams down to where they meet the backwater, on all of them—that is, so that the streams would form uniformly. The streams would get a little ahead, but from the records of the past overflows it would take about twelve days to get to the Kincaid property. (Fol. 301.)

Question. When this water overflows from a crevasse, or a succession of crevasses, as you have put it, at the head of this confined channel in the easy general way in which you seem to indicate that it would do, what is it that washes away and destroys houses in the path of such a flood as that?

Answer. A certain amount of buoyancy of the water, and as the velocity of the water moves past, of course, there is a certain amount of pressure.

It has a maximum velocity of about three-fourths of a foot a second at Mr. Kincaid's property; at the latitude of Lake Village in Arkansas, it would be about one foot a second. That is sufficient to wash away houses, if it is deep enough. One foot a second would not be sufficient to wash away, or wash out, concrete highways, and those sorts of things. (Fol. 302.) The washing out of the concrete road occurs when the water is running off, it is when the water is falling rather than when it is rising.

Question. In fact, don't you know it to be a fact, that if you had about nine hundred thousand cubic feet of water coming down it would necessarily destroy everything in its path where that water became congested and a second head was built up there, that it would have to run out?

Answer. If the water is definitely restricted up in its main course—in other words, if the section area is cut down very materially—the velocity would have to compensate for it, because the quantity is the same. (Fol. 303.)

It does not take an awful lot of velocity, if you have a great depth, to cause houses to go away. They will float away without any velocity at all if given sufficient depth. If the adopted plan

had been in operation in 1927, the fuse-plug section would necessarily have had to go out at about the time that break occurred in Mississippi of the sixty and one-half feet at Arkansas City. (Fol. 304.)

In my opinion about six hundred thousand cubic feet of water a second would have gone out through the Cypress Creek fuse plug had the adopted plan been in effect in 1927. (Fol. 306.)

Question. Captain, will you tell me just exactly what you mean by fuse-plug levee?

Answer. The existing levee at the head of the— Well, it is a term coined to describe any levee over which water would overflow.

Question. It is a term coined for that project.

Answer. It was coined—the term was coined for this project.

Question. The term was coined for this project to describe a levee which will fail while other levees hold?

86 Answer. Yes, sir.

Question. And it will fail at predetermined stages?

Answer. Yes, sir.

Question. While other levees hold?

Answer. Yes, sir.

Question. Now you stated this quantity of water, this fuse plug at Cypress Creek, would overtop and that there would be a succession of smaller crevasses until the quantity of water intended to be diverted would pass through?

Answer. Yes, sir.

Question. And that is the way that fuse plug would operate?

Answer. Yes, sir.

Question. When asked the question as to how it would be made certain that that fuse plug at Cypress Creek would give away and fail, if the plan worked, General Jadwin, in explaining the plan, testified in answer to a question by Mr. Sinclair at the hearing before the Flood Control Committee of the House of Representatives, that he knew—that he had no doubt that it would fail:

"Yes, sir; I have no doubt of it at all; and I would look at the materials to be sure that the section was such that a break would occur. We are almost certain to find material suitable. If we did not, we would have to put something in there with a little sand weakness in it."

Now, was General Jadwin wrong about the way that fuse plug would be made to operate, if necessary?

Answer. I believe he was, under the project as adopted.

Question. Then the Chief of Engineers who furnished the plans which are the basis of the project that is now being executed was wrong when he said that that was the way it would be made to work, if necessary?

Answer. I believe so.

Question. Could not be any chance, of course, of your being wrong about the way that it would work?

Answer. My view of it, I am quite certain, that under any possible existing policy, under the system, the existing project, there could be no change in that fuse-plug levee. (Fol. 307.)

The adopted project was reported to Congress, and thereafter made public on December 8, 1927. The project contains in it the estimate of probable interval or frequency of overflow of one to twelve. I testified that I furnished all figures which resulted in the estimate of one to twelve. I made it one to thirteen, and on account of conservatism or superstition the Chief of Engineers made it one to twelve. (Fol. 310.)

The average width of the combined Boeuf and Tensas Basins, or the areas in both basins that were overflowed in 1927, was about thirty-five miles. (Fol. 310.) The greatest width was nearly eighty miles. The average width between the protection levees and the hills on the other side is around fifteen miles—the average width of the Boeuf Basin floodway. It was generally reported that the area of lands overflowed by the flood of 1927 was around twenty thousand square miles. I do not know the area of the lands overflowed in the Yazoo Basin by the Mounds Landing crevasse in 1927, but I can give an estimate. I would say between two thousand and
87 two thousand five hundred square miles. The combined area in the Boeuf and Tensas Basins that was overflowed in 1927 was close to six thousand square miles. The area of the Boeuf Basin floodway from Cypress Creek to Sicily Island is around two thousand two hundred and fifty square miles. (Fol. 311.) It is contemplated that the waters will overflow that area, not necessarily all of the area, but whatever water comes out will pass in that two thousand two hundred and fifty square miles. This will not include what might otherwise come out at Mounds Landing. (Fol. 312.) There are various estimates as to the amount that passed into Yazoo Basin through the Mounds Landing in 1927, and the estimate of five hundred thousand second-feet is as good and correct an estimate as either of us can get. Every man is entitled to his own opinion. Under the operation of the plan that five hundred thousand second-feet can not pass through a crevasse on the east side of the river, and it must either pass down the main channel of the river or pass through the Cypress Creek diversion, or stay in the back-water pool, or stay up in the tributaries above there so as to reduce the rate. Eventually it will all come down.

Question. And that raise of three feet of your levees, other than the fuse-plug levee, using two feet to contain the water, and leaving one foot freeboard, won't carry any additional five hundred thousand feet, will it?

Answer. In the main river?

Question. Yes, sir.

Answer. No, sir.

Question. How much will it carry?

Answer. About one hundred and twenty thousand extra feet—two foot raise. (Fol. 313.)

I stated this morning that with the operation of the plan less water will leave the main river than without the plan. I mean by that the total amount that will leave the river everywhere. Whether less would leave the river at Cypress Creek with the plan in operation is somewhat of a debatable proposition as to the restraining effect of levees.

In 1927, with the immense quantity leaving the river in other places, none left the river through that fuse plug. (Fol. 314.) The plan as proposed, or as recommended by the Chief of Engineers, as approved by Congress, and reported upon by the flood-control board on August 8, 1928, and approved by the President, provided certain works—certain guide-line levees. Since that date there have been developments.

Question. Floodways added that were not shown in the original plan? Floodway levees or guide-line levees taken off that were shown in the original plan? That is all true, is it not?

Answer. The only place that I can think of that that is true is that in the original project, Document 90, a levee was contemplated, a spur levee was contemplated down the Ouachita from Monroe instead of a circle around Monroe, the belief at that time being that that would afford sufficient protection.

Question. In other words, the west guide-line levee of the floodway extended below the city of Monroe some fourteen or fifteen miles, is that not true?

88 Answer. Down to Bosco.

Question. Which is twenty miles, air line?

Answer. From Monroe, air line; yes, sir.

Question. And longer distance by river?

Answer. Yes, sir. (Fol. 316.)

There were certain reservations in the presidential approval of the engineering design which made it impossible to cut down the levees at the head of and at the foot of New Madrid floodway as it was originally contemplated. So at the present the existing levees, where there are levees above and below, will not be taken down, so they will be in the same situation as before.

I should say, interpreting it as an engineer, that without regard to the scale of the map attached to the project the project when it was adopted and approved by the President contained a guide-line levee directly behind Foster Kincaid's land. I interpret that the purpose of the east guide-line levee was to protect as much of the land as practicable on the eastern side, tying into the Macon Ridge up above and the Macon Ridge down below.

Question. Had it not been established at the time the plan was adopted how far south the east guide-line levee of the Boeuf Basin would have to go?

Answer. Detailed surveys had not been made; no, sir; some of them have not been made yet. (Fol. 319.)

It is not found out yet how far south the east guide-line levee has to go. The levee location is not approved below this point. [Indicated on map by the witness.] This location is purely unofficial both as to exact position and as to exact effect. The only approved levee in this section is over to the back side of the Monroe Circle. Those are the only levees which can be said to be officially located.

Question. Then how can you decide as to what effect levees will have if you don't know where those levees are to be built?

Answer. It so happens that the levees here have no effect except to protect the lands behind them.

They have an effect of restraining waters. They have a tendency to restrain the water discharged down through there. I did not say how much it was. I admitted this morning that the guide-line levee has the effect of holding water off of the land that is outside of the floodway. That is what it is put there for. (Fol. 320.) It also has the effect of holding water on the land that is inside the levee.

On Kincaid's property I recommended the grades to be 83.9, as I recall, which will be 83.9 feet above mean Gulf level. My recollection is that the levee to be run southeast of Monroe and form a part of the Monroe Circle is about 86 mean Gulf level. Height above the ground level varies, depending upon the ground.

Question. Is it not a fact that it varies from about twenty to twenty-four feet high above the ground level?

Answer. That may be so. I don't know. It is on plenty of maps.

Question. Is there any way you can find out?

Answer. Yes, sir.

Question. Please do so.

Mr. MODISETTE says: Your honor, I do not quite get the purport of all this extended investigation of the variance between
89 what counsel supposes to be the adopted plan and the changes, and I would like to know what the purpose is. They are not attacking the plan. They came in and practically admitted that they would accept the plan and not attack it.

The COURT. State your object.

Mr. RUSSELL. We have stated that we are not attacking the plan before this tribunal, but we are attacking the execution of the plan and the effect it will have on the property in that floodway on the property of Foster Kincaid. We allege in the bill that, pretending to act under the authority of the flood control act, an act of Congress, the defendants are performing certain acts which are violations of the law, taking property in violation of the fifth amendment to the Constitution. It is my theory that the defendants violate the law itself when they build levees that were not provided for by the plan, which is the law. The plan was made the law and approved by the President. That is the plan and that is the law. Our allegation in the bill is that they are violating the law as well as the Constitution, and seek to show it by showing they are not even following the plan; that they have changed—they have changed

these levees, their location and their size, their length, and consequently the effect that it will have on property within them, and that it is done in violation of the Jones bill, the flood control act, as well as the Constitution.

The COURT. In the very nature of things, in presenting a project of this kind to Congress without a previous survey and location of these levees, the bill could not provide the details, and if the plan was to be executed at all those details had to be left to the Engineering Corps. So that I don't see that this evidence has any relevancy to this case. (Fol. 323.)

Redirect examination of Captain John Paul Dean, by Mr. MODISETTE:

Question. What is the probable period of the return of the 1927 flood.

Answer. Approximately one hundred years, in my judgment.

Question. At that time, under the adopted project and with a repeated flood equal to that of 1927, how much water would, in your opinion, pass down the Boeuf Basin?

Answer. I don't believe the water would pass down the Boeuf Basin.

It is my belief that the main river will carry all of a flood of that magnitude before then.

Recross-examination, by Mr. STREET:

I arrived at my calculation that there won't be that much water in the river again for another one hundred years by a method similar to that described and made up at the same time of the computation for lesser heights. As a suggestion, if you have a period of observations which is greater than the interval of frequency you are looking for, the observations or predictions as to frequency are quite reliable. The more often it has happended in the past, the more surely you can predict how often it is going to happen in the future. But when it comes to a man predicting how often something is going to happen
that has never happened, I believe that you are getting on
90 very dangerous ground. When you are predicting the frequency of something that has happened only once or twice, you are still on rather dangerous ground. But I am less optimistic on matters like that than most predictors of frequency, and certainly think you are getting on dangerous ground when you start to predict things which only occur once or twice in the period of which we have a record, and I am not willing to gamble on the one hundred years' frequency of the 1927 flood. The frequency may be one hundred years, but I am willing to grant that it may happen next year.

Question. How much less water came down the Mississippi River and its tributaries, going past Arkansas City, in 1929 than past there in 1927?

Answer. More water went past Arkansas City in the main river in 1929 at a two-foot lower stage—one and eight-tenths feet lower stage—than passed there in 1927, if my memory is correct.

Question. I will ask you as an expert about weather conditions and the effect the weather may have in high water and everything else if in your opinion it would not have been a fact that had we had an inch and a half more rainfall down over the Arkansas and White River Valleys at the critical time of the 1927 flood there would not have been more high water than you had in 1927?

Answer. Yes.

Question. Then, in order to say that there won't be another flood water equal to the 1927 flood, you have got to figure on what the weather is going to do and the amount of water that is going to flow in this country?

Answer. Predict the average frequency on the different weather conditions. That is simple.

Question. If you get the regular flow of water from the upper Mississippi and the Missouri and Ohio, and then have heavy rainfall in the Arkansas River, you are liable to have a flood greater than 1927 flood at any time?

Answer. Yes, sir.

I arrived at my guess of one hundred years to elapse before we have that condition again solely upon the experiences of the past frequency of floods.

Question. The only authority we could rely on in such a condition as this is the Almighty Himself, because He is the only one who controls the elements?

Answer. No. I rely on the facts. I rely on the experiences of the past, and I couple with that the possibilities in the future. (Fol. 326.)

Question. I want to ask you this, if in 1912, 1913, and 1916, if the levees in the river had held and had been able to hold the water, if you would not have had enough at Arkansas City that would have broken the fuse-plug levee in each of those years?

Answer. I believe 1912 would have broken. I don't believe the others would.

The water at Arkansas City in 1912 was three-tenths of a foot higher than in 1913. (Fol. 327.)

The highest gauge of the Mississippi River at Arkansas City in 1912 was 55.33. I do not know offhand how many feet a second passed Arkansas City at that stage, but my recollection is that a discharge measurement was made during 1912, which indicated something in excess of 2,012,000 cubic feet a second. The highest stage of water at Arkansas City in 1913 was 55.15. The highest stage of the water in 1916 at Arkansas City was 56.4. The maximum measurement of discharge in the vicinity of that point in 1916 appears to be 1,889,000 cubic feet a second.

Question. Now, I will ask you if that is not about the amount of discharge you are providing for the river under your project here, before it goes over the fuse-plug levee?

Answer. Just about.

Question. Far more water than it will take to break the fuse-plug levee?

Answer. Yes, sir. That is about the amount we contemplate.

Question. Then in 1916 you had a stage of water there that would have broken the fuse plug if all the other levees had held?

Answer. Yes, sir.

I believe the channel of the river itself is carrying more water now than it did back in those times. I believe that the river is progressively improving and carrying more water at a given stage and that the progressive improvement will continue as the revetment program and other measures for improvement continue.

Col. ERNEST GRAVES, called by complainant, testified on direct examination by Mr. Modisette as follows:

Live in Washington, D. C. Am a retired officer of the Army—retired because of disability; on active duty with my own consent. I am eligible for any duty that an active officer is, and by reason of that I am eligible for the Mississippi River Commission, and I am on that commission. I am also an assistant in the office of the Chief of Engineers, and am also on the Inter-Oceanic Canal Board. I am an engineer by profession. (Fol. 332.)

I got my engineering training at West Point, in the Engineering School of the Army. I graduated from the University of North Carolina before going to West Point, where I graduated in 1905. Have been in the Army Engineering Corps since, until I retired in 1920 or 1921. I was employed as district engineer at Vicksburg, Mississippi, at one time. Had charge of the Ouachita River area in Louisiana. Am acquainted with all of this country. I assisted in the preparation of the Army engineering plan that resulted in the adopted plan of flood control of the Mississippi.

In studying the plan of flood control, we had, what Gen. Jadwin termed before the committee on Congress, the most expert men we could get, and they checked back and forth, and finally adopted a plan according to the opinion that would grade highest. We considered all these discharges that we hear so much about, and wrestled with them a long time, and got the same result that one generally gets—certain observations brought inconsistent conclusions with other observations. (Fol. 334.) Some of us had measured discharges of the rivers, and we knew what errors might creep in in measuring the depth of a sixty-foot river running seven feet per second, tearing away. All of the floods have different discharges corresponding to the same stage. We decided that this flood-control project, as near as possible, ought to be based on what a man
92 could see. No man could see a cubic foot per second. Very few of us can conceive exactly what a cubic foot a second means, and a million cubic feet a second is hard to understand. So what we set out to do was to keep the water from going over the levee. We did not care how much water was in between the levees. And we knew when a man put down that the Cairo gauge went to

fifty-five, we knew he had seen it and that it do go to fifty-five; when he put down that two million second-feet went by there, we did not know whether it did or not. (Fol. 335.) The river commission gave a series of what they called confined stages for a maximum probable flood, and the Weather Bureau furnished us the gauges of what they called a maximum possible flood, but the Weather Bureau did not know anything about cubic feet per second. We lined these two sets of gauges up against each other, and we took the highest one, and we said: We want to protect against the highest one. There never was a great variance of those two stages prophesied by the two until you got below that where the river splits—that made complications. The prophecy at Cairo, for instance, was confined to a flood maximum of possibly 66 feet. When you raise the Cairo levee over 60 feet, that is when we had to go into discharges. When we found out we had six feet of water there, and we wanted to find out how much lateral space on the sides of the river it would take to carry that extra six feet of water, we had to go to the Mississippi River Commission records and data to prove the number of cubic feet per second for that extra six feet. We thought that in doing that we would carry smaller error than if we tried to take the discharge of the entire river; and we worked with it, got that extra water at 400,000 or 450,000 or 500,000 second feet. (Fol. 336.) We never tried to work any closer than that with it. We did the same thing at Arkansas City. The prophesied stages of the Mississippi River Commission was about 74. The Weather Bureau showed around 71 confined. The height above the Arkansas River levee, which was about 60½, multiplied by 75,000 feet per second, representing one foot, gives 900,000 second-feet or 75,000 second-feet per foot rise. That was as near as we could estimate about the amount of water that might at some time flow in that latitude if the Weather Bureau and commission's deductions were correct. We spent a long time hunting for a place in this valley to take about that amount of water slope, width, depth, with moderate levees, and after very considerable consideration, decided that the Boeuf Basin was the only place. We knew there would have to be levees on the side, but at that time we did not know how high—we don't know yet. (Fol. 337.)

The New Madrid floodway levee was to be a new levee to be built about five miles from the river side to a creek or place of water flow. The project prescribed that the river side levee could be cut down corresponding to fifty-five on the Cairo gauge. It did not go into detail of how much that levee would be reduced in elevation, but left it all to be determined. You can not explain this thing without going into the economics. We had impressions about how much money the United States would spend. We knew, of course, that the court would have to finally decide the matter. We did not pretend to try it, but we wanted to fix the scheme so that the court would decide for the United States. So we did not want to cut down any levee or reduce anything that a man had. We

knew whenever you build a levee that the stages where the water is held would be raised. We knew that the back levee on the New Madrid floodway to keep the water from spreading over twice as much area would therefore raise the stage in there. (Fol. 338.) We did not think the United States would have to pay for it unless we cut that front levee down.. We put in the project that that levee was to be lowered to grade line corresponding to Cairo, fifty-five, which was approximately three feet. We knew somebody would have to pay for it. The levees above this were to be raised, the levees below it to be raised, the levees over at Cairo were to be raised and strengthened. If the floods came and raised the river up above a height corresponding to fifty-five on the Cairo gage, water was to flow into the New Madrid floodway. (Fol. 339.)

A possible four hundred or four hundred and fifty (thousand) second-feet of water may flow out of the river just south of Cairo, and come back into the river just above New Madrid. The question of stages at New Madrid and below New Madrid for that flow depends on the synchronism of that water going out of the river and coming back into the river, and every drop of it will go by Arkansas City anyway, and you see it may run by Arkansas City in a different synchronism. If you did not have flood control over there and had a flood on the Saint Francis River, it might not come back at Helena, and whether that water will come back so as to move the peak of the flood nobody knows, or whether it might go out and come back so as to raise the peak a little; and it might go out and come back so as to lower the peak a little. The question of water that passes Arkansas City by reason of the New Madrid flood way can not be named quantitatively. (Fol. 340.) I doubt it will be changed at all, because there is a long stretch between New Madrid and Arkansas City; that water is lost in the factors that go to make up the peak, and it can not be said to produce any material flow at Arkansas City or any greater flood, and I do not think it can be said to produce any less flood there. It is something nobody knows anything about.

At the top of the map there north of Helena is a blue space. That is the backwater of the Saint Francis River. There is a proviso that the levees shall be raised and strengthened on both sides of the river except opposite the Saint Francis backwater. The levees may not be raised so high as the levees on the east side—I think it amounts to about one or two feet. There will be a fuse plug, and if the water becomes high enough to top the west side levee it will flow through in the Saint Francis backwater and affect that backwater to some extent, pushing it northward and keep raising it. (Fol. 341.)

South of Helena it is also provided that the levee opposite the backwater of the White and Arkansas may be raised less than the east side levees by one or two feet. That means that if floods come of sufficient greatness, the water is sure to go over the west side levee and into the Arkansas and White backwater area and can not top the

east side levee, which means the Arkansas and White backwaters will be raised, depending on whether it happened, and backwater up further north.

94 Now coming down to the Boeuf Basin. In the first place there has been made a distinction between the Arkansas River and the Mississippi. I am not going to presume to pass on that question, but I might state that, officially the backwater effect of the Mississippi River passing up the Arkansas to nearly a half mile of Pine Bluff has two reasons—two different parts of the project. The first project provides for the levees brought within a half mile of Pine Bluff on the south side of the Arkansas. The project provides that the Arkansas River levees be raised from a quarter of a mile below Pine Bluff down to a place north of Arkansas City, and that south of Luna Landing the main river levee is to be raised about three feet, and at each end of the so-called fuse plug the levee down the Mississippi River and the levee on the east side bank is to be carried into the fuse-plug territory for a distance of about a mile to assure that if the crevasses occur they will not go into the corner where the State levees were and thereby leave the so-called flood way. It has been explained that the arrangement at the north end of this basin is more or less of a bottle neck and that the tendency is to restrict the flow out of the main river because of the choking effect of the side levees. If the same number of crevasses of the same size occur elsewhere across the river or anywhere else, without any restriction, the water would have a tendency to spread and more water would leave the main river. (Fol. 343.) The main river is prepared to carry more water than ever before. It is not necessarily certain that for a lesser flow the crevasses that occur in this fuse plug will be different from the crevasses that occur were not the plan carried out; but the set-up of the plan tends to reduce the amount of water that can pass from the main river and in no way affords facilities for increasing it. It is just as true that, considering the water after it has left the main river, if it be permitted to spread without any restraint, it is bound to be lower than if not restrained, and the depth behind the side levees is bound to be greater than if those side levees were not there, and no one connected with this plan has ever claimed otherwise.

Now, as to the Luna Landing and Eudora Levee—if the levees were not there and the water that had left the main river should split, it is obvious that less would go down the Boeuf Basin. (Fol. 344.)

Every effort has been made to put as much property back of these levees as possible, and in beginning the general lower line it was the purpose to put them as far apart as possible, so that if there was any quarrel over any acceptance later on we would not have to push them where they were pushed together, if they were. A small move horizontally makes little difference to the grade, because we put the grade so high I don't think there is a chance on earth of any

water going over and in doing that every unfavorable condition has been assumed, so that the result will be maximum safety.

As to the levees of Louisiana and the water that might reach these, I would like to say that the location of Mr. Kincaid's property happens to be in such a situation that it does not affect that at all. (Fol. 346.)

With regard to the probabilities of floods overtopping Cypress Creek Levee—I don't know. We took Captain Dean's figures,
95 which said once in thirteen years. We said once in twelve years because we thought that was the lowest period that was possible. (Fol. 347.)

In all the methods to work out this probability of other floods, it came out smaller than what anybody believed—that is just offhand. So we took Captain Dean's figure—we did not take—his figures said once in thirteen years. We said once in twelve years and put it down, because we thought that was the lowest period that was possible.

Now I want to explain some observations I have made on it. As a matter of fact, I have taken Lieutenant Dean's figures and I cannot back up anything. I say on it myself except by these general statements. But I have taken a report that we have in the office—it is a blue print—and copies the record from the Mississippi River Commission, and I think they are from the Mississippi River Commission, and I think they are copied rather roughly. I do not think they will go into details. At one time I had them memorized, but I have forgotten them because I don't think they are worth it. It says "Arkansas City, 1912, two million feet, fifty five; 1913, one million seven hundred and eighty two thousand feet, fifty-five." I notice a difference of over two hundred thousand second feet at the same gauge occurred. "Nineteen-sixteen one million eight hundred and eighty-nine thousand feet fifty-six and four tenths," less water than 1912 and higher gauge; nineteen twenty, one million five hundred and seventy-three thousand second-feet, gauge height, fifty-four; 1922, one million seven hundred and sixty-one thousand feet, gauge height fifty-six. When you come to these, you think—why, you don't feel like using it, but you can see this 1927 flood was—in the Mississippi River Commission pamphlet, as I remember it—was two million four hundred and seventy-two thousand second-feet. And I am not standing back of any of these cubic feet per second. I say it is their pamphlet. If you take—and there is another deduction on the 1927 flood that is made by, I think, the Mississippi River Commission, in which they say about one million eight hundred thousand second-feet corresponds to sixty and one-half on the Arkansas City gauge. If you take those discharges—if you take the discharges of any year and place them opposite the gauge of other years, you get inconsistent results. And I worked out last night, from this table here—I got that four-year period without any trouble at all.

I think it is a mistake to think that the 1912 flood would do as much as some people say. In other words, if the Mississippi River

Commission estimates that it confined at 57½ feet on the Arkansas City gauge, it is not at all certain that it would go over the Cypress Creek levee. If the 1912 flood would not go over that levee then the only floods we have that would would be the 1882 and the 1927 floods, and that is Col. Potter's fifty-year period. I do not know whether it is right or not, but I think once in 12 years is quite conservative. (Fol. 349.)

Question. When the water overtops the Cypress Creek levee will a wall of water move down the Boeuf Basin?

Answer. I have seen a crevasse—one.

I can not tell you where that crevasse was—somewhere on the Arkansas River when I was down there in 1912 and 1913. I am
96 not an expert on how crevasses move, but I have read and studied a great deal about what they do, and I know that when a crevasse breaks and there is no way of tying it off and it has quite a distance to let off that energy, and it cuts the levee out around and digs out a blue hole—everybody knows that it knocks down things in front of it. I remember one of these crevasses in 1912, in a curve in the Boeuf River. It was shown that the water down the Boeuf River channel where it moved faster—bounded right by fast—but just as soon as it got out over the land area it moved down the basin slowly and rose slowly. (Fol. 350.)

Of course, the reason that people get into trouble is that very same thing; they think they can stay there and may be it will never come up to the extent of a flood and they keep on thinking so until they finally take them off. They are not much concerned about it. Often after they see the water most go get everything out and drive their cattle out.

The question of water confined between levees wouldn't be much different between the past, as everybody in the Mississippi Valley knows. There you can find examples of how it moves even between levees. This year there was a crevasse in the Laconia Circle—not one confined between levees, but confined within a circle. It did not flood Laconia Circle with any such wall of water.

I was in the Chief of Engineer's office all the time during the construction of this flood-control bill and have copies of that bill in its various stages before Congress. (Fol. 351.)

Question. Produce them.

Mr. DUFOUR. What is the purpose of that, Mr. Modisette?

Mr. MODISETTE. The purpose is to show the congressional action—the early development of the bill with reference to flowage rights in section 4.

Mr. DUFOUR. The complainant objects to the admission of this document for the reason that no evidence is admissible to vary or contradict the terms of the statute duly passed by the Congress of the United States and signed by the President of the United States, and the court, of its own motion, should have the right to resort to the history of this legislation on public questions. The intermediate

stages of other bills than that finally passed by the Congress are irrelevant and inadmissible.

Mr. MODISETTE. The Government offers this document in evidence, not for the purpose of amending or altering or changing the present law, but solely for the purpose of aiding the court in the interpretation of the intent of the Congress in passing the bill and particularly with reference to section 4 thereof.

Mr. DUFOUR. To which the same objection is urged that the bill stands or falls upon the words which must be interpreted in their usual, accepted sense. That is the canon of statutory construction—the usual accepted meaning of words.

The COURT. What portion of the record which would be made up by the Journals have you here to supplement this?

Mr. MODISETTE. I have, your honor, the reports. I have the conference report on it—I have about three different reports and I am perfectly willing for the court to examine them all. (Fol. 353–4.)

97 The COURT. My ruling is this, that the court either of its own motion may take cognizance of the Journals and records of either House for the purpose of determining the legislative progress of the bill or by the introduction of any authenticated or admitted document that bears upon the same subject. Ultimately the court may be required to resort to these documents for the purpose of interpreting the act and, in the event of a doubt, the well-recognized principle is that these sources may be used in determining the meaning and intent of Congress.

Mr. MODISETTE. The witness is tendered.

Mr. RUSSELL. No questions. (Fol. 354.)

General THOMAS H. JACKSON, called on behalf of the defendants, testified on direct examination by Mr. Modisette, as follows:

Am commissioned officer in the Corps of Engineers, occupying the present position of president of the Mississippi River Commission and division engineer of the Lower Mississippi Valley division. Was a member of the special board provided in the flood control act for ironing out the differences between the adopted plan and those recommended by the Mississippi River Commission. Am an engineer by profession, a graduate of the West Point Military Academy and the Engineering School. Am a member of the American Society of Civil Engineers. (Fol. 355.) Was secretary and recorder of the California Flood Control Commission in 1907 to 1911, during which time I prepared for the commission flood-control plans and project for the control of the floods of the Sacramento River. I am not a hydraulic expert. I am a flood-control engineer. Have been directly connected with flood-control engineering three years in California in the preparation of that project and the best part of four years in the Dallas engineering district in surveying all flood streams, and about two years on the Ohio River flood board, where we initiated certain surveys and studied and prepared plans for the control of floods on the Ohio. (Fol. 356.) At the present time I am the

ranking officer of the Government in this division in the Engineering Corps.

I heard the testimony of Col. Graves and Capt. Dean in this case yesterday and to-day, and I think I can say I concur in general with the opinion expressed by Captain Dean with reference to his hydraulic data and its interpretation, and I agree in full with the expressions or statements made by Col. Graves. In regard to the Government's plan of work in the adopted project, with special reference to the Boeuf Basin, we are now under operations which will lead to the raising of the Arkansas River levee a height of approximately three feet over the present levee grades. From Pine Bluff to the mouth of the river we are engaged in working on a general raising of the Mississippi River levees from a point directly above the mouth of the Arkansas down through to Old River, an average raising of possibly three feet. We are preparing to locate and construct guide levees, protection levees, and side levees in the Boeuf Basin, extending from Cypress Bayou fuse-plug levee to Monroe, or thereabout, to the west, and going into the high ground in the
98 vicinity of Sicily Island on the east. In general, work has progressed to a point that that work upon the Arkansas and the Mississippi problem in some cases on contract extending over three years, and we are projecting work in general so as to be from one to two years ahead of our appropriation. The amount of money available in that general area which I have mentioned made available through past or through the present fiscal year which ends June 30th is possibly about twelve million dollars, which we hope to have spent by the end of that period. (Fol. 358.)

The fuse-plug theory is not new. It is probably one that came into existence shortly after the levee. There is a fuse-plug section at Old River.

Q. What water will be discharged, if any, from the main channel of the Mississippi through this fuse plug at Old River?

A. If you assume it must come out of Old River, as coming over the bank here, none. Assuming it came from the west of the Mississippi watershed, all. (Fol. 359.)

Spillway is a term which has crept into this project. It is a description which is entirely unsound. It is a long-channel floodway, diversion, or anything you want to call it, but it is not a spillway. A spillway is more than a natural thing. I might say this: The basin shown with the levee at its head is like a garage with a door at the end. The door is the spill. The term has sort of crept in as a plan for an extended waterway.

The Boeuf Basin is a natural overflow of the channel of the river which you find probably in all typically alluvial streams. It has been removed from its purely natural state by a levee across its head in the vicinity of Cypress Creek. (Fol. 361.)

I have been interested quite deeply over a period of a considerable number of years in the preparation of flood-control plans, and particularly in the last couple of years. During that time my office has

been making what we call surveys which lead to plans and projects in all of the flood streams of the Mississippi Valley except the Ohio and the Illinois. This includes something like fifty streams, two of which may be considered large. It involves quantities of water probably two or three times the maximum predicted discharge of the Mississippi and costs of plans involving two or three billion dollars. We have parties in the field through the valley from the extreme Canadian border to the Gulf, engaged in this survey and the preparation of these projects. There is a tendency on the part of engineers, and possibly as well on the part of individuals, to exaggerate menaces when they exist as something not directly affecting them, and there is, on the other hand, a constant tendency of those confronted with any menace, who form the solution of things directly and also puts money into their pockets to minimize it. I should say this has been the greatest curse of all flood control and reclamation which I have had any contact with. You do not have to go any further than this river, I believe, to appreciate what I have said.

You can not keep your flood estimates too high, if it is within reasonable bounds that your conservatism will permit, and it is wise that you keep it high, because you are only risking some money if you keep it high, and if you keep it low you are risking the soundness of your project, and if you keep it too low you have contributed directly to its destruction. I offer this mainly to show when you talk quantities of water and you talk about people's estimates you have got to stop and think whether that man is thinking in terms of money which he may have to spend or whether he is just talking to the public at large. (Fol. 364.)

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A large portion of the data that comes before us in considering flood projects, or any existing project, is based on nothing more than some form of guess, or which may sometimes not even approach an estimate. On the other hand, we do at times, not often in fact, have data which is based on the most reliable work which it is possible for man to obtain. There is one evidence that is always true, and that is gauge heights. You can not change them after they have been recorded. The next approach in accuracy are the observations obtained by sound methods. When you come to talk about what crevasses carry, none testifying in this court the last three or four days, to my knowledge, had any approximation of a measurement—not even by the Mississippi River Commission. This information coming so fast and going so fast, it was almost impossible to even get it. We are trying to get it in the future. Next time we may; in the past it has not been physically possible—perhaps through the lack of facilities. I am not criticizing the commission for it, but I point out that where you are considering flood data which is not the result of careful preparation you are guessing. Made by men sitting behind a desk, getting these things on paper, lots of them are made without the recorder ever having seen the locality. To determine an estimate, all other elements—cross-section, slant up and down of the

pool—all come into the picture. He who uses that as facts better not say he is going to pay the bill.

I think that all of these factors of safety were taken into account in the adopted plan of flood control of the Mississippi. I think that is one of the cases where the question of costs has not been in any way abated in the preparation of the engineering plan. I think, as you follow it through, every effort has been made to keep the factors of safety to the maximum; and as an illustration of this, the twelve-year prediction. I do not believe that any competent, self-respecting man can consider this carefully and wisely and say a prediction of twelve years is too low. Personally, I think it is placed in the class much above that. (Fol. 366.)

Q. What do you mean by that?

A. That the frequency of its recurrence is once in twelve years. Whether it is a hundred or whether it is twenty-five, I can not say, but my general opinion would be that its frequency will not be as great as once in twenty-five years. There is no doubt but what we used the highest factor. The estimate of eight hundred thousand from the Arkansas was the highest estimate made, out of any reason. So I accepted it rather than that of some man who was trying to hold it back. And there are always those trying to keep it down. So, for that reason, I think the project has given the greatest consideration to safeness and soundness.

Q. Will additional water leave the river by means of the adopted project at Cypress Creek?

A. No.

Q. Why not?

100 A. Because with any flood approximately exceeding that or materially exceeding that of 1929 probably would crevasse the river at points. The probable extent of the overflow would depend on the magnitude of the stream of flow greater than that was in 1929. In preparing and initiating and carrying out the present plan we are going to make the river carry more water than it carried before—and it is carrying more.

Q. Do you mean 1929, or 1927?

A. No; I said a flood much more than that in 1929. That is the maximum flood that has ever been carried, to my knowledge, without a crevasse.

Q. Will the side levees in Louisiana put more water on Kincaid's property than if the levees in Louisana were not built?

A. No.

Q. Why?

A. Because a levee built above will not affect any property below. (Fol. 368.)

Cross-examination of General Thomas H. Jackson, by Mr. STREET:

Q. General, in the early part of your testimony you were asked about who closed the Cypress Creek Gap, and I understood you to

say that you did not know positively, but that you thought it was by permission of the Government or the Mississippi River Commission that it was closed.

A. I have no personal knowledge of that incident. (Fol. 368.)

Q. Now I want you to repeat what you gave as a reason for saying that they had to have the Government's permission to do that?

A. Well, I don't know what reason was given. But I would assume from my general knowledge of navigation matters that you could not close a tributary to a navigable stream without a permit from the Secretary of War or some delegated authority.

Q. Do you term Cypress Creek as a tributary within the meaning of navigation?

A. Well, sir, as a tributary to the Mississippi. I don't make any interpretation, I am giving the only reason I can think of.

I don't know whether Cypress Creek was a stream capable of carrying commerce. Any stream that will float logs is capable of commerce under the present laws as far as I know. (Fol. 369.)

I spoke of the Boeuf Basin as a natural outlet for the river. I only know it is a natural basin created by the river in which flood waters discharged until man denied them access. (Fol. 370.) Without any knowledge of detail, my knowledge tells me what happened and what has been a natural basin. They are evident to me by an examination of any overflow map.

Q. I want to know if, as a representative of the Government, you claim the Government's right to take this for a flood way if they find that they want it for that purpose?

A. I know that it will do that if not restrained by competent authority. I have no knowledge of the Mississippi River back of about a year and a half. (Fol. 372.)

Q. I ask you if in the plans that you are working under if it is your intention to give, pending the completion of your guide
101 levees in the flood way to give the same protection in the lands in that flood way as you are giving to the Arkansas River, to the lands protected by the Arkansas River levees above the flood way?

A. The Arkansas River is in a class by itself and is in no way connected with the Boeuf levee construction.

Q. I will ask you, General, if you are aware that the flood control bill provides that the lands in the flood way shall be given the same protection as the lands protected by adjacent levees are given until the entire project is completed?

A. If I understand your previous question as to what you mean now: Under the law we must give that protection which you have indicated, and the other leveeing done by not tying—of the Arkansas levee into the Luna levee, when not complete. This Luna levee south—we are planning to close that until practically the entire thing is finished. In other words, we are leaving escapes of water into the Macon, and in the Boeuf, basins behind the west levee until the whole thing can be closed up. In other words, really denying protection on this side to meet the condition of the law.

Q. In other words, you are making a fuse plug of the entire western side of the river levee from Cypress Creek on down in order not to violate that provision that you must give to this immediate area in here the same protection which you must give the balance?

A. No. It is included in the influence of it, but we are building no fuse-plug levees except at the fuse-plug area. The fuse-plug levee is the levee which you intend to carry water. (Fol. 375.)

The fuse-plug levee is already built there. We would merely leave it as it is.

Under the plan nothing was said about where these levees in question will be built. As a natural consequence and normal engineering plan, you would start these levees down from towards the bottom, tying them into the main river levee, which is the fuse-plug section, and let it flow. That was undoubtedly intended in the plan. In attempting to provide these levees in given areas without the basin the same protection that we give those within, so that the whole basin shall have the same protection, while they are built, we are planning to leave this conjunction with the fuse plug open, so that water, if it did come in, it would escape around the sides or would be in the clear and outside to the west and outside to the east; because if we closed it we would be giving more protection to the east and west outside than we would give in the levee; and the law apparently forbade that. We didn't want to do it, but I can not see any other solution or interpretation of the law. So in building this Eudora levee we didn't close it completely but left it open so that the floods could escape into the Boeuf Basin and part to go over into the Macon. Why that was introduced I don't know. It is hardly good flood-control engineering, but it is the law, and we are trying to follow it. But to say these lands shall be given equal protection during the construction of the levees—our idea is to leave means by which water will escape to those areas during the construction period and close them probably in the last season as rapidly as possible. We would not do it as an engineering construction pro-
102 gram. We can not even extend possibly the up and down stream levees up to the north side limits of the fuse plug and comply with that provision; but we have always said if the local interests demand it and do not urge the law we would encroach on that as much as possible; but we have got to keep that guide. We have got to keep free of that. We have been told not to touch it.

Q. In other words, General, if I understand you, you are trying to evade the plain provision of the law that says that pending the completion of the flood control works in the floodway that the lands in the floodway must be given the same protection as lands above and below it and as the lands protected by levees below?

A. Judge, if you can tell me any other way of doing it and not violate the law in one part or another, we would certainly give it very careful consideration. We would like suggestions as to an engineering solution of it. We can not raise the fuse plug. (Fol. 377.)

It is not our intention in carrying out the plan to build up the fuse-plug levee at all, nor to strengthen it in any way. Pending completion of the guide-line levees shown on the map we will not give any protection at the head of the Boeuf Basin except what it has now. We intend to build up the levees above and below it and on the other side of the river as far as money can be obtained to do it within reasonable distances. It will be limited to a great extent by what the local interests want. We will make it fifty miles if they want it, or we will make it five. We are not hinging on that law in any respect. We are doing a little amount of work here on the west levee of the main river where priority now is not quite so high. We are trying as near as we can to give priority to the places in the greatest jeopardy and where it will be the greatest benefit in the early stage. (Fol. 379.) We will probably have the levees within the basin built, if not stopped, long before the levees on the east side of the Macon are built. There will be lots of areas unfinished on the east side. There is no tying in work. That is a problem that might increase that jeopardy. (Fol. 380.)

Q. Now then, General, if you leave the head of the fuse-plug section down to its present height and build up the levees above and below and don't make a continuous line of levee on either side of your floodway, what will be the result to this territory on the western side of the river?

A. Well, it might be a little more favorably affected, but there would be parts that would be given more protection than the land within, to the parts within the leveed portion, which would be contrary to law. There may be a motive behind this law which we do not know, but it does not work in well with the construction program but we have not been able to get—if you were to depart from it we would probably be in the courts the same as we are to-day. (Fol. 381.)

All of the locality in Arkansas on the south bank of the Arkansas River as far up as the overflow can extend will be left open until a solution can be worked out to take care of it. We can not build it any sooner. Drainage must be taken care of, and a levee built without providing drainage simply would not be any good with stored backwater entering. Drainage problems must be taken care of in all these levee constructions before closures can be made. I am not familiar with the details whether or not there is a drainage
103 there at present which will be disturbed and has to be destroyed. If the local interests urge that it should be stopped, I think it can be stopped. If we find the pronounced opinion of the locality that way, it will be. I don't think there is anybody objecting and it will be settled just the best we can.

Q. Then there will be no protection or no additional protection under your administration of this plan to lands in the flood way while you are building the guide lines which will protect adjacent lands?

Mr. MODISETTE. If the court please, I don't want to raise an objection, but I think that is unnecessary repetition.

The COURT. It is perfectly apparent that the engineers can not build all the levees at once, and then if this fuse-plug levee was built up here, that immediately, of course, leaves open the proposition that the levee on the Mississippi River all the way down as far as you may consider is still at the same stage until it is built up; and it is the old saying that "a chain is no stronger than its weakest link." (Fol. 383.)

Cross-examination continued by Mr. RUSSELL: I have no detail knowledge of the northern part of the Boeuf Basin area. I know how the plan is going to affect the area in general.

Q. You were asked the direct question by counsel for the Government if the plan would divert any additional flood water into the Boeuf Basin.

A. No. Divert additional flood waters?

Q. Into the Boeuf Basin.

A. No.

Q. You mean, then, the plan would not result in diverting from the river that total amount of water more than in the past or more than now passes?

A. Yes, sir. (Fol. 384.)

The plan contemplates more water. When the waters will reach flood stage, they will pass into the Boeuf Basin.

It is not so that in a flood of the magnitude of the 1927 flood that as a result of the plan more water would pass down the Boeuf Basin than passed in 1927.

Q. Do you know how much passed down the Boeuf Basin?

A. Only from what has been announced.

Q. In 1927.

A. About 600,000 second-feet.

Q. No; that was down the Boeuf and Tensas. I mean down the Boeuf Basin in 1927. Do you know what that was?

A. Four hundred and fifty thousand.

Q. Now then, under the plan and with the equivalent of the 1927 flood, is it not a fact that more than that will go down the Boeuf Basin?

A. About six hundred thousand I believe should pass down.

Q. Therefore, more would pass down the Boeuf Basin as a result of the plan, with the equivalent of the 1927 flood, than passed during the 1927 flood?

A. Yes.

Q. And additional water would thereby be diverted from the main channel under the plan down the Boeuf Basin?

A. More water goes down the Boeuf Basin. That is plain.

104 Q. Now, you stated, General Jackson, in your testimony before the hearings before the Senate committee on the confirmation of your nomination, that the Boeuf Basin up there had in no previous overflow ever escaped overflow. Is that a fact?

A. I think I made an error in forgetting one year there was something like that.

Q. Don't you know you made an error?

Mr. MODISETTE. If the court please, is he trying the validity of the nomination of the general?

The COURT. What is the purpose, Mr. Russell?

Mr. RUSSELL. Cross-examining the witness to attempt to show the court how much or how little he may know about this subject, and that is legal.

The COURT. The testimony is relevant. In other words, if he was testifying about practically the same matter that he is testifying about here and there was a different statement, counsel is entitled to ask that for the purpose of determining the effect of his testimony and, in the second place, to allow him to explain it if he wishes to.

To which ruling counsel for defendants excepted. (Fol. 387.)

All waters in the Mississippi watershed belong to the Mississippi.

It is a fact that part of the waters, or that part of the discharge at the head of the basin, is the waters from the main channel of the Mississippi diverted from Cypress Creek and passing down there. (Fol. 388.)

EDGAR S. MAUPIN, on behalf of the defendants, testified on direct examination by Mr. Modisette as follows:

Am a civil engineer; acquired my technical training at the University of Missouri; graduated from the civil engineering department of that institution in 1905. Am employed by the United States at this time as an engineer. Stationed at Rosedale, Mississippi, the northern area. Have been employed there three months. We are beginning levee construction on this project, on the forty-five miles of levee under contract. Before going to Rosedale I was located at Monroe, western area, as area engineer. Have been located in this area in the service of the Government about twenty-three years. Was in Vicksburg part of the time and here part of the time as headquarters, but always in charge of the area. (Fol. 389.)

I was here during the 1912 and 1927 floods.

Question. When a crevasse occurs in the fuse-plug section will a wall of water tear upon the Boeuf Basin, Mr. Maupin?

Answer. Not very far. It may come a quarter or a half mile if the flowage is very high with pretty good velocity, after which it is generally used up in the blue holes, ridges, timber, and other obstructions. That means most of the energy is used up as you leave the crevasse, and when you get down the valley here it keeps down until finally it comes down here at the lower end and there is nothing to it at all.

In the flood of 1927 the per second rate of flow of the water was about twelve miles a day. It traveled about that fast out of the breaks up in Arkansas. (Fol. 390.)

105 The distance from Cypress Creek down to Monroe is eighty miles and from Monroe to Kincaid's about thirty miles. From Arkansas Creek to Kincaid, then, would be over a hundred miles.

Have been over practically every foot of the country from Cypress Creek down to Kincaid. The rate of flow of the water in the 1912 flood as it came down the Boeuf Basin was about twelve miles a day. It averaged that.

Under the adopted project less water will leave the main channel than at the present time.

The proposed side levees in Louisiana will have no effect on Kincaid's property. They may have a slight effect at the lower end. A little short connection at the south may make a hundredth or ten-thousandth of an inch—practically nothing. (Fol. 391.)

As to how frequently the Cypress Creek levee may be expected to overtop, the only way to estimate that is by the past. We have had a flood which would have overtopped it, probably one in 1882, one in 1912, and one in 1927—a period of a little over fifteen years, when you take the average. It is just a game of chance when you take the average.

Question. Please give the court the overflow history of the Kincaid property according to your knowledge of flood heights by your personal acquaintance with his particular property.

Answer. I have been on his particular property and am personally acquainted with it. According to gauge heights at those times, the different years, in 1912, entirely covered, overflowed; in 1913 it was not, there was some of it out; in 1916 it was down the little sloughs and upon a part of it. This land is surrounded by sloughs. In 1922, just to the edge of the sloughs around it; and in 1927—you all know what happened.

According to the records of the Mississippi River Commission the Mississippi River at Arkansas City carried more water in the crest of 1929 than it did in 1927.

The revetment program and the river improvement is making it possible to carry more water in the main river. The main channel of the Mississippi is the place for it anyhow. (Fol. 392.)

Cross-examination of Edgar S. Maupin, by Mr. RUSSELL:

In 1927 the depth of the water on Kincaid's land, according to indications down there on the garage, was up to the hinges. I would say it was 5 or 6 feet deep at his house.

Assuming an elevation, testified to by witnesses on both sides, of 66½ feet, the water on Kincaid's property in 1927 would be a little over 4 feet. The crest of the water was at 70.8, and the ground elevation is 60.8.

In 1922 the water below backed up at the edge of the sloughs. And you remember there was a crevasse at Ferriday, and that helped out; a part of it might have got in Deer Creek. I think some came from crevasses of the Mississippi River. (Fol. 393.)

In 1913 he got some water in the sloughs around the edges of it. In 1912 it was overflowed—at the highest ground very little. There is a little knoll where the house is. It was practically about the level of the highest ground.

106 Question. Now, in answering a question by counsel, you gave the rate of advance of the flood at 12 miles a day—I think counsel said the overflow of 1912. Did you mean 1912 or 1927?

Answer. I mean 1927. (Fol. 394.)

When I stated on direct examination that less water would be taken out of the river by operation of the plan than heretofore,

meant in any given stage there will be less water taken out of the crevasse as it is going along than there will be at the present time. There will be less water taken out of the river because you pass more down the main channel; therefore you take less out. (Fol. 395.)

I don't know how much water the Boeuf Basin carried in 1927, but estimate it at 450,000.

Assuming a flood of the magnitude of 1927, the Mississippi would have carried, at about the same stage, about 2,500,000 this year—1929.

Question. With a flood of the magnitude of 1927—that is, a flood that would have produced stages that would have been produced in 1927 flood at Arkansas City, with a flood of that size at 60½ feet.

Answer. On the gauge at Arkansas City it would carry about 2,050,000 cubic feet.

The gauge in Arkansas City in 1927 was 60.5. I don't know how high it would have been if it had not been crevassed. But I know how big the flood was. About 600,000 would be diverted through in 1927. At the gauge of 60½ at Arkansas City I think about 1,850,000 passed down the river in 1927.

Question. Now, if water has no force except just a short distance below the crevasse, what is it about the waters of 1927 or any destructive floods that destroys property?

Answer. I didn't say that it didn't have any force. I said that there was lots of force right below, but that it dispersed as it went down. We have seen large damage in 1927 in this area.

Question. You mean here in the immediate area of Monroe?

Answer. Yes, sir. You and I worked together on them.

Question. How about the damage where the waters get sixteen feet deep?

Answer. It won't make any difference.

Question. How much does it take to float a house?

Answer. Well, it might make a difference to some of the property.

Question. Well, we are talking about property.

Answer. Yes, sir.

Question. How much would it take to float a house?

Answer. It might float a cabin.

Question. How high a cabin?

Answer. I have seen the water around the eaves of them.

Question. Ten feet will float one?

Answer. About 10 or 12 feet.

The effect of the construction of the Luna-Eudora Levee with respect to the water that ordinarily would pass behind the Macon Ridge into the Tensas Basin will be that it will come down the Boeuf Basin. It is estimated that 150,000 came down in 1927. With the plan in operation, with that levee construction, it will come through the Boeuf Basin. There is no other place for it to go. (Fol. 398.)

107 Monroe, Louisiana, October 17, 1929, at ten o'clock a. m. all parties being present in court, the trial of this case was resumed as follows:

Mr. MODISETTE. If the court please, a stipulation entered into by counsel for complainant and the Government was referred to and exhibited on yesterday, but the original thereof has not been filed. We have a duplicate signed copy here that I would like to offer to be filed at this time to complete the record, and I also wish to file the reference report of both the House and Senate Bill No. 3740 which we exhibited to the court yesterday. Whether they were formerly offered then or not I do not recall, but I do that to complete the record. I believe that Mr. Russell has some objection to make.

Mr. RUSSELL. Merely to renew the objection that was made yesterday, your honor.

By the COURT. All right. Same ruling.

Mr. RUSSELL. Same exception and reservation.

Mr. MODISETTE. Your honor, since court adjournment yesterday afternoon we have discussed this matter and considered it very seriously with the officials of the Government, the Army engineers, and we have come to the conclusion that the Government is ready at this time to rest, and I therefore announce that the Government's side of the evidence is completed.

By Mr. DUFOUR. If the court pleases, I desire to ask is that map a part of the record?

Mr. MODISETTE. It has been formally offered in evidence as I recall it. If you wish to offer it, you may do so.

By Mr. DUFOUR. I think the court would agree with us that we can force the Government to put that map in evidence. We can not be put in the attitude of being bound by any hostile legends on that map which might affect us if we were to offer it. We made no objections to their witnesses testifying from this map without first having offered it, and strenuous objection was made to our map before it was even identified. The record is not complete without it and I think the court should exercise his discretion and force the map into the records without plaintiff being forced or called upon to offer it.

Mr. MODISETTE. We have no objection to the map going in evidence, though I do not think the court would go to the expense of forcing the Government to offer anything in evidence, but we have no objection to it going in.

The COURT. The ordinary procedure is that if the plaintiff had raised no objection to your using this map for the purpose of presenting the Government's case it could not have done so until it was offered in evidence, but in the nature of things I do not see how the appellate court is going to understand or review the evidence in the record with regard to the map unless that map is before it. The map should be in the record, so that the appellate court may have the benefit of it in connecting it up with the evidence that has been given.

Mr. MODISETTE. Will it assist the court for the map to go in?

The COURT. I have seen the map and have a fair idea of the testimony, but the appellate court would be at an absolute disadvantage without the benefit of the map before it with this testimony.

108 The Government now offers in evidence the map used by Captain Dean with the right reserved to substituting therefor a certified copy, that exhibit to be marked "D5" for identification.

Now the Government rests.

Mr. DUFOUR. The complainant rests.

Approved:

BEN C. DAWKINS,
U. S. Dist. Judge.
W. B. LEE,
Clerk, U. S. Dist. Court,
West. Dis. of La.

In United States District Court for the Western District of Louisiana, Monroe Division

No. 355. In equity

R. FOSTER KINCAID, SR., COMPLAINANT

vs.

UNITED STATES OF AMERICA ET AL., RESPONDENTS

Col. Wm. C. Dufour, Mr. John St. Paul, jr., Mr. J. T. Freeman, New Orleans, Lousiana; Mr. Harry H. Russell, Monroe, Louisiana; Mr. C. J. Ellis, Rayville, Louisiana; Messrs. Street & Burnside, Lake Village, Arkansas, for complainant.

Mr. Philip H. Mecom, U. S. Attorney; Mr. J. O. Modisette, Special Asst. U. S. Attorney, Shreveport, Louisiana; Mr. John C. Dyot, Special Asst. U. S. Attorney, St. Louis, Mo., for respondents.

Opinion

(Filed December 14, 1929)

DAWKINS, *J.:*

In the former opinion rendered in this case on the motion to dismiss, for the reason that the petition disclosed no cause or right of action, the court reviewed the allegations of the bill of complaint at length. (35 Fed. (2nd) 235.) The Government was dismissed as an unnecessary party, but otherwise the motion was overruled and the remaining defendants, the Secretary of War, Mississippi River Commission, Chief of Engineers, and subordinate officers thereafter answered, putting at issue the material allegations of the petition. The case has now been submitted upon its merits.

The record shows that complainant owns one hundred and sixty acres of land within the Boeuf Basin, between the east guide levees contemplated by the adoption plan for flood control and the hills on the west bank of the Ouachita River. This property, together with the buildings and improvements thereon, is worth under nor-

mal conditions, about $9,000.00, and while the complainant does not reside on it personally, he cultivates about one hundred and twenty acres thereof, with the assistance of his father and brother. There is attached to this opinion a copy of a map showing the proposed locations of the levees along the Boeuf Basin, from which it will be seen that the property involved lies about midway between the guide levees on the east and the hills on the west, which are from ten to twelve miles apart. The west guide levee will end just below
109 the city of Monroe, which is some forty miles northwest of complainant's land, while the one on the east will extend a few miles south of his property. From the end of the east guide levee south to the vicinity of Bayou des Glaises in Avoyelles Parish, the area between the levees on the west bank of the Mississippi River and the hills west of the Ouachita River, except for the high ground of Sicily Island, will be left exposed to the waters of the Boeuf Basin, Bayou Macon, and Tensas River, as well as the back waters of the Ouachita and Black Rivers. There is a ridge or strip of high land known as Macon Ridge, which begins in Chicot County, Arkansas, and extends south into and through Louisiana, passing in the vicinity of the town of Delhi, to a point near Sicily Island, in Catahoula Parish. This ridge separates the valleys of the Boeuf and Tensas Rivers, which converge below the end of Macon Ridge and several miles south of the lower end of the east guide levee. The hills on the west bank of the Ouachita come up to the water's edge in the locality of Harrisonburg, Louisiana, and between this point and the south end of Macon Ridge is situated a circular-shaped elevation of appreciable area, called Sicily Island, which impedes the outflow from the Boeuf Basin. The result is that while this basin has an average width of about fifteen miles, it spreads out toward the south end to probably twenty miles but closes in at Sicily Island with outlets on either side thereof, which are only a few miles in width. This condition at present causes back water to accumulate in the area immediately south of complainant's property and will continue to do so after construction of the proposed guide levees. When the Mississippi reaches such a stage that the fuse plug levee just below Arkansas City will break, under the plan, about one-third of the total volume of water passing that point at the time will be turned down the Boeuf floodway and into the area just described.

In a general way, the adopted project, commonly called the Jadwin plan, contemplates diverting from the Mississippi River in the vicinity of Cairo, Illinois, sufficient water to insure that the main channel will carry the remainder safely to the mouth of the St. Francis River. The water so diverted will be carried through a by-pass or floodway to a point near Helena, Arkansas, where it will return through the mouth of the St. Francis and join that coming down the main river. From Helena south the levees on the west bank of the Mississippi will be maintained at sufficient height to hold all of this water to a point about twelve miles distant from a similar levee on

the south bank of the Arkansas River. Through this gap the White River passes into the Mississippi about midway between the lower end of the levee on its west bank above mentioned and the mouth of the Arkansas. Lying between these levees to the north and west of the twelve mile gap will be located a pool or basin for backwater of some twelve hundred square miles, into which will be poured all of the waters of the White and its watershed, as well as the overflow on the north bank of the Arkansas for a distance up stream to the locality of Pine Bluff. It is not contemplated that levees will be built along this stretch of the Arkansas River. When this basin of twelve hundred square miles is filled, its outlet, together with all water coming down the White and Arkansas Rivers, will be discharged through the twelve-mile gap above described. This
110 combined volume will be added to that in the main stream of the Mississippi, which as previously shown, will consist both of its own waters brought down from Cairo and the quantity which will have returned from the St. Francis Basin at Helena. Then for a few miles the Mississippi, which will have a width between the levees on either side of approximately four miles, will carry it all until it reaches the fuse plug levee below Arkansas City.

The expression "fuse plug" was coined no doubt because of the fact that, in operation, this stretch of levee will break, or be washed out, when the river reaches a predetermined height of sixty and one-half feet, in similar fashion to what happens when a current of electricity attains a designed voltage sufficient to blow out the fuse in electrical machinery. It simply means that the levees above and below this stretch of about twenty miles will be strengthened and raised approximately three feet higher than the fuse plug and when the water in the Mississippi reaches sixty and one-half feet it will begin to flow over. It is contemplated that this will cause a crevasse through the fuse-plug levee, which will gradually widen to include the whole of twenty miles if the condition of the Mississippi requires. The former Chief of Engineers, and author of the project, stated in his examination before the Flood Control Committee of the House of Representatives, that the soil of this piece of levee would be softened with sand or otherwise to be sure that it would break without undue danger to those above and below, although the Government's chief hydraulic expert in his testimony in this case stated that he did not so understand the purpose.

With a flood at the maximum contemplated by the plan, the quantity of water passing down the Boeuf Basin, it is estimated will be between 900,000 and 1,250,000 second-feet, with the result that complaint's property as well as all other lands therein will be submerged. The depth, of course, will vary according to the conditions and stages of water in the Mississippi, the Tensas, Black, and Ouachita Rivers, at the time, but may reach a maximum of approximately 16.4 feet on the plaintiff's land. In the opinion of some of the engineers, the velocity will not be very great but will be sufficient to destroy the buildings and improvements in the floodway which

are not anchored to the ground. The duration of the water upon these lands will also depend upon conditions prevailing in the lower Mississippi Valley, including the Ouachita, Black, Red, and Atchafalaya Rivers, but will probably be from thirty to sixty days. The high waters of the Mississippi and its tributaries usually come in the spring of the year, and the question of whether the lands in this floodway may be cultivated after the waters have passed off will depend upon the time at which the break occurs as well as the conditions just mentioned. If it should be in the late spring, say about the first of May, and the water should remain for sixty days, it would be somewhere between the first and middle of July before the plaintiff and others similarly situated could begin cultivation. By the time their improvements sufficient to enable them to plant were restored, it would be too late in the season to raise anything except late corn and forage crops, for the staple crop of cotton could not be planted with any reasonable hope of success. It is true that plaintiff and others as far from the fuse-plug levees would have time to move their livestock, household furniture, and farming
111 implements out of the path of the flood, but of course the opportunity for fleeing to high ground would diminish in exact proportion to the nearness of the land to the point of the levee's breaking. It is well known that in a large part of the area between the guide levees of the Boeuf Basin, as well as below where the levees end to the Bayou des Glaises section, livestock is allowed to range in the woods and swamps to such extent as would require several days to herd and drive them to safety.

Contrasted with these conditions with which plaintiff and others within the floodway will have to deal, those fortunate enough to own property behind the levees will be fully protected, including their improvements, livestock, etc., and can pursue their farming and other activities in perfect safety. Those within the floodway will live under a constant menace, for no one can tell in what years meteorological conditions will require the use of their lands for the purpose intended by the plan—i. e., a floodway. The Government engineers estimate that this will probably not happen more than once in twelve years, while evidence offered on behalf of the plaintiff tends to indicate that in the light of past experience it might occur once in every four or five years.

However, as pointed out in the former opinion in this case, there is no escape from the proposition that the complainant's property and that of all others similarly situated, will be, by express design of the plan, compelled to bear the whole burden whenever the necessity arises. The act itself (sec. 9) specifically makes secs. 14, 16, and 17 of the rivers and harbors act of 1899, applicable to all lands, waters, easements, and other property and rights acquired or constructed under the provisions of this act (the flood-control act) which will prevent any interference with the carrying out of the plan and purposes of the act of May 15, 1928. This was done, no

doubt, because of the recommendation of the Chief of Engineers, in Document No. 90, referred to as the adopted project, that the Federal Government should have complete control over these floodways. It is likewise beyond question that all those portions of the valley which have been heretofore subjected to the overflow waters of the Mississippi and its tributaries, which the plan is designed to protect, will be entirely relieved and the waters which they might otherwise receive will be carried to the sea, either through the main channel of the river or through these proposed floodways.

Referring now to the flood-control act, in sec. 4 it is provided: "The United States shall provide flowage rights *for additional destructive floodwaters that will pass by reason of diversions from the main channel of the Mississippi River* * * *" (Italics by writer of this opinion.)

If the conditions which the carrying out of the plan will produce result in a diversion through the Boeuf Basin floodway of "additional flood waters * * * from the main channel of the Mississippi River" within the meaning of this provision, then clearly the statute requires that the "Government shall provide" these "flowage rights" and all question as to how they were to be "provided" was removed by the proviso which immediately follows: "That in all cases where the execution of the flood-control plan here adopted results in benefits to property, such benefits shall be taken into consideration by way of reducing the amount of compensation to be "paid." That is, they must be acquired by purchase or condemnation as elsewhere provided in the act.

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Now, the record shows that during the time preceding 1927, for which there are any reasonable figures, the quantity of water passing down in the vicinity of the proposed fuse-plug levee, into both the Boeuf and Tensas Basins, were as follows: In 1913, 137,732 second-feet; in 1916, 385,814 second-feet. What is known as the Cypress Creek outlet from the Arkansas River was closed by the State of Louisiana, with the consent of the War Department about 1921 and 1922, although the waters of that river and the Mississippi reached stages which would have sent them through that point without the levee, none came down these basins. Then, in the flood of 1927, it is estimated that a total of 600,000 second-feet flowed through the Boeuf and Tensas Basins, combined, of which 450,000 second-feet went down the former, all of which came from crevasses on the south bank of the Arkansas. Under the proposed plan, the entrance to the Tensas Basin at its head is to be closed by the guide levees, and all the water which will escape through the fuse-plug near Arkansas City will be diverted down the Boeuf Valley; hence the Tensas area will be fully protected in the future, except from the waters within its own watershed, which will be relatively insignificant. Likewise the quantity that comes down through the Boeuf Basin from its own drainage, when unaffected by overflow waters of the Arkansas and Mississippi, is unimportant. In the past some water from crevasses

on the Arkansas have flowed further west into Bayou Bartholomew and down the Ouachita, thus relieving the Boeuf Basin until it returned south of the city of Monroe. In none of these small river basins would there be any occasion for concern from their own waters except in the lower sections where the country is affected to some extent by backwater from the Ouachita, Black, and Red Rivers, or from water entering through crevasses in the Mississippi between the northern end of Macon Ridge and the mouth of Red River.

As stated in the former opinion, the flood-control act does not define what is meant by "additional flood waters." But even if we give these words the widest interpretation, without consideration for the fact that the waters to be diverted will be confined to a limited channel, it is proposed, as above shown, under the maximum flood conditions, to discharge from the main stream of the Mississippi through the Boeuf floodway from 900,000 to 1,250,000 second-feet of water, whereas it appears, according to the most reliable figures obtainable, not more than 600,000 second-feet have ever before passed down the Boeuf and Tensas combined, of which 450,000 second-feet went through the former. Unquestionably, it would seem to the extent that the waters which would *go through* the Tensas, under present conditions, will be diverted through the Boeuf floodway (and it was conceded by the Government's chief expert engineer) this will be a diversion of additional waters.

As a result of the examination of the Government's chief experts I gather that the contention of the War Department is, because the levees upon the main stream of the river will be raised several feet and there will be no breaks or crevasses at any point except those designed for floodways, and the capacity of the Mississippi
113 otherwise will be increased so that it will carry a greater volume than ever before, there will actually be less water diverted or escaping from the river than has been the case in the past. For this reason they say there will be no diversion of additional waters. However, I can not conceive that Congress had any such idea in mind when it inserted the provision now under consideration. Besides the estimated 600,000 second-feet which came into the Boeuf and Tensas Basins from crevasses in the south bank of the Arkansas River in 1927, at about the same time another occurred on the east bank of the Mississippi at Mounds Landing, approximately opposite the proposed fuse-plug levee, and through which it is estimated 500,000 feet of water also escaped into the basin of the Yazoo River in the State of Mississippi. The underlying theory of the adopted plan is that the main channel of the river shall be relieved of its excess waters at flood stage by diverting them through definitely determined channels. This, of course, means that all of the water which has gone out of the Mississippi in past overfloweds at all points or at least such as will escape under the improved and strengthened levees of the present plan above what it is deemed safe for the main river to carry, will have to flow through these diversion channels.

Certainly, to the extent that the lands in the floodways will receive more water than ever before if destructive, they will bear a greater burden within the meaning of the act.

It is also contended on behalf of the Government that because the Boeuf Basin, prior to the closing of the Cypress Creek Gap on the south bank of the Arkansas, was overflowed from that source on an average oftener than it is calculated the stages of the Mississippi will blow out the fuse plug, that the area to be used for the floodway will actually receive less water, when probable frequency is considered. However, as pointed out heretofore, this stretch of levee on the Arkansas River had already been built and afforded the same protection comparatively as any other major levee on either the Mississippi or Arkansas. I think it also reasonable to say that Congress had in mind the conditions as they existed in 1927, and with which they were dealing in the act of May 15, 1928. They were attempting to formulate a comprehensive system as outlined by the document, No. 90, and realized that they were giving full protection to about two-thirds of the area of the Mississippi Valley, which had theretofore been subjected to the menace of overflow under the old system and that as a consequence, certain sections of the valley, which were to be devoted to the purpose of spillways, would be compelled to bear the whole burden for the benefit of protected lands.

It seems also to be one of the theories of the defense that inasmuch as the height of the levee to be used as a fuse plug will not be lessened, and the waters of the Mississippi under present conditions would overtop this point when it reached 60½ feet, no protection is being taken away from property owners in the Boeuf Valley; hence they should receive no compensation for the use of their lands to carry the excess water above that height. I do not believe that any such narrow construction is justified by the language of the law, for to the extent which the property of the complainant and others similarly situated will be taken for the purposes of the floodway, to aid navigation of the river and to protect the lands of other persons, the same will be done in the public interest, and to the extent 114 that he and they will be deprived of the unhampered control, possession, and use of their land, just to that extent will their property be confiscated. Of course, so long as their lands along with those of all other property owners in the Mississippi Valley were subject to the uncontrolled action of the elements and were dependent upon the strength or weakness of the constructions upon the main stream of the river, they were in no greater danger and were compelled to bear no heavier burden than anyone else. But when the Government departed from the policy of building levees and other public works for the purpose of commerce and navigation alone and expressly entered the field of controlling floods for the protection and reclamation of private lands, then it became engaged in activities which make it responsible for the invasion of private rights. It will not be assumed that Congress intended to violate

the fifth amendment to the Constitution by taking private property for public purposes without just compensation.

There is a universally recognized principle that the owner of property subject to overflow waters of either navigable or nonnavigable streams is entitled to have them continue in their natural state "without burden or hindrance imposed by artificial means, and no public easement beyond the natural one can arise without grant or dedication, save by condemnation with appropriate compensation for the private right." (U. S. *vs.* Cress, 243 U. S. 231.) This doctrine has had its application usually in cases where the property was situated upon or near the particular stream whose waters were affected by the acts of man; but mere size or magnitude of the condition with which we are dealing can not alter the principle. All of the property within the range of the overflow of the Mississippi in its natural state, and before construction of levees or other works for confining it to the main channel, was by virtue of its location, charged with the burden of receiving those waters at flood time in such manner and to such extent as nature had provided. It is equally well settled, as shown in the previous opinion in this case, that every one so affected had the right to build levees or dykes along the banks of the stream to keep the water off his own property, without responsibility to those above or below or on the other side, so long as he did not change or impede its natural course. Therefore, merely because of the fact that these levees, as they were increased in height and extended throughout the length of the Mississippi, were unable to hold the river within its channel at flood stages, did not change the legal situation. The water continued to seek the weakest spot, as expressed by the engineers, and when it was found, followed the course of nature just as in the original state of the river. There was under these circumstances no artificial condition created by which the waters should designedly flow over specific lands. However, in the case before us, the very basis of the plan is that by strengthening and increasing the height of the existing levees, the excess water shall be diverted over property within the floodways. In other words, the whole scheme is one for artificially controlling the waters of the whole valley so as to divert them through these channels at flood stage. And this is true notwithstanding the beneficient purpose for which the project was conceived.

I think it reasonably clear that when the plan is completed the property within the floodways can be cultivated in most years,
115 but always, of course, with the knowledge that a flood may come and cause the owners or operators to suffer serious loss. However, these are elements going to the amount or value to be paid for the rights; for the act clearly indicates that the Government may acquire, either in fee simple the lands desired, or merely a servitude or right of flowage in those cases where nothing more is needed.

It is admitted that the defendants do not contemplate prosecuting any proceedings for the condemnation of flowage rights through the

Boeuf Basin, or that they will endeavor to acquire them amicably from the owners. Under the view they have taken of the law, they could not have followed a different course. It also appears that the surveys and other works of the engineers, including the location of the levees and the proposed construction of the fuse plug at the head of the floodway in Arkansas, has, for the present at least, affected materially the sale and mortgage value of property between the proposed levees which will be subjected to the flood waters passing through. This may be to some extent a psychological condition, but it seems real enough to those most affected.

The act, in Section IV provides that when the Secretary of War wishes to acquire "any lands, easements or rights of way * * * needed in carrying out this project," he shall institute proceedings in the United States district court where the same are situated, if unable to agree with the owners as to price; but if he desires to take possession and begin work before the issue of value is determined, he may do so upon showing that the money to pay for such lands, easements, or rights of way has been made available to the satisfaction of the court. Of course, the physical occupancy of the ground in this case will not take place until and when it is overflowed by water in time of flood; but the process of subjecting it to that service and the taking possession in so far as is either necessary or contemplated by the act will begin with the construction of the first levee or works which are intended to direct the water upon the land. No other character of possession seems reasonably to have been contemplated in any case where "flowage rights" or rights of way as distinguished from lands were to be acquired, than that which flows from the construction of the works. When they will have been completed the appropriation will be complete. It can not be that if the owner is entitled to compensation he must wait until an overflow comes. Under the law of this State, unqualified ownership of property includes the usus, fructus, and abusus, or the right to possess, enjoy the fruits, and dispose of the whole in the most unrestricted manner. R. C. C. Arts. 491; 490; 493. When either of these is taken away or diminished, to that extent does the owner lose a part of his property, or which is the same, the elements that constitute ownership. (See Ambler Realty Co. vs. Village of Euclid, 297 Fed. 307; Buchanan vs. Wurley, 245 U. S. 60; Pumpelly vs. Green Bay Co., 13 Wall., 166; United States vs. Welsh, 217 U. S. 333; Boston Chamber of Commerce vs. Boston, 217 U. S., 189; Tucker vs. U. S., 283 Fed., 428.)

My conclusion is that the act requires the Government to pay for the rights which it seeks to exercise over plaintiff's property,
116 and in so far as the defendants are proceeding without complying therewith, they should be restrained.

Monroe, Louisiana, this the 13th day of December, A. D., 1929.

BEN C. DAWKINS, *U. S. D. J.*

[File endorsement omitted.]

In United States District Court

[Title omitted.]

Petition and order for appeal

Filed February 24, 1930

To the honorable BEN C. DAWKINS, judge of said court:

Now come the respondents in the above numbered and entitled cause, in their several official capacities, by Philip H. Mecom, United States attorney, and J. O. Modisette, special assistant to the United States attorney, who filed this petition by direction of the Attorney General of the United States, and feeling themselves aggrieved by the final judgment of this court, dated February 4, 1930, and entered on the 4th day of February, 1930, in said cause, in favor of the complainant, R. Foster Kincaid, senior, ordering and decreeing that a permanent writ of injunction issue herein against respondents, restraining and enjoining the defendants, and each of them, their agents, servants, employees, counsel, and attorneys from proceeding with the construction authorized by or carrying out plan adopted by the act of Congress approved May 15, 1928, known as the Mississippi River flood-control act, in the Boeuf Basin floodway, unless and until the property of the said complainant has been acquired by the United States, or the flowage rights over the same acquired either by purchase or condemnation for such purpose, petition, this honorable court for an order of appeal to the United States Circuit Court of Appeals for the Fifth Circuit, sitting at New Orleans, and file in connection herewith their assignment of errors.

Wherefore, respondents pray that the order of appeal be granted, returnable according to law, and that the bond for the appeal be fixed and approved, and that the complainant or his counsel be duly cited and served with notice hereof; pray for all necessary orders and decrees and for full and general relief.

PHILIP H. MECOM,
United States Attorney.
J. O. MODISETTE,
Special Assistant to the U. S. Atty.

FEBRUARY 24, 1930.

ORDER

Considering the above and foregoing petition for an appeal, together with the assignment of errors and with accompanying bond for appeal.

It is therefore ordered that the defendants be, and they are hereby,
granted an appeal to the United States Circuit Court of
117 Appeals for the Fifth Circuit, sitting at New Orleans, returnable according to law; and the appeal bond is hereby fixed in

the sum of five hundred ($500.00) dollars, and the bond submitted is approved.

It is further ordered that notice of this appeal be duly given or served upon the complainant or his counsel of record.

Thus done, ordered, and signed at Shreveport, Louisiana, on this the 24th day of February, A. D. 1930.

BEN C. DAWKINS,
United States Judge.

In United States District Court

Respondents' assignment of error

Filed February 24, 1930

Now come the respondents in the above numbered and entitled cause, by their attorneys, and in connection with their petition for an appeal, make and file the following assignment of errors, which they allege occurred on the trial and hearing of this cause and on occasion of the granting to the complainant the writ of injunction, and upon which they will rely in the prosecution of this appeal, and the said respondents say that in the record and proceedings in said cause, and in the interlocutory and final judgments rendered therein and during the aforesaid trials and hearings thereof in the said district court, error intervened to the prejudice of respondents and they assign the following errors, namely:

1. The court erred in admitting in evidence over objection Senate bill No. 3740 known as the flood-control act, and House Document No. 90, of the 70th Congress, first session, and the report of the special board named in the flood-control act, and the various documents of the President of the United States in partially approving the plan.

2. The court erred in admitting evidence over objection and against the stipulation of counsel of acts, works, and conduct of the *the* respondents beyond the jurisdiction of this court and outside of the Boeuf Basin, as the stipulation of counsel, reading:

"It is stipulated between counsel for the complainant and the defendants herein that it is admitted that the United States has advertised for and received bids for the construction of certain parts of the work to be performed in the Boeuf Basin in carrying out the terms of the adopted project given in the act approved May 15, 1928.

"It is further stipulated that the relief asked by the complainant in this case is and shall be confined solely to the construction in the Boeuf Basin within the district of the court where the suit is pending, and that no attack is made upon the adopted plan as such."

limits and restricts the testimony and the issues to the Boeuf Basin in Louisiana.

3. The court erred in overruling the demurrer or motion to dismiss for lack of jurisdiction filed by respondents, reading as follows:

"Now come the respondents and each of them, through undersigned counsel, in the above numbered and entitled matter appearing herein solely and only for the purpose of this motion, and with full reservation of all rights of all of them and each and all of them, and move this honorable court to dismiss the complainant's bill of complaint for the following reasons and because of the following grounds, namely:

"1. That this court is without jurisdiction.

118 "2. That the United States is a sovereign power and can not be sued without its consent.

"3. That a suit against the other defendants is, in effect, a suit against the United States and that an official of the Government of the United States can not be sued when there is no personal judgment sought against him and he has no personal interest in the matter involved.

"4. That the court has no jurisdiction under the bill of complaint.

"5. That there is a misjoinder of parties defendant herein.

"6. That it appears from the bill of complaint, with the exception of the United States, that the respondents therein named are not acting in a personal or individual capacity, or engaged in the performance of any act or acts other than those prescribed by the laws of the United States and all of their acts are official and as the representatives of the United States.

"7. That the complainant is not entitled to relief in equity inasmuch as he has a plain, adequate, and complete remedy at law.

"8. In the alternative, and only in the alternative, should the court overrule this motion to dismiss for all of the above and foregoing reasons, then and in that event respondents show that the said bill of complaint discloses no cause of action or no right of action.

"Wherefore respondents and each of them pray that this motion to dismiss be sustained and that this complainant's bill be dismissed with costs, and in the alternative, and only in the alternative, should this motion to dismiss be overruled by the court after considering the grounds in the order pleaded, then and in that event your respondents' rights to further plead hereto be specially reserved to them; they pray for all necessary orders and decrees and for full and general relief."

4. The court erred in holding that all respondents, except the United States, were properly joined as defendants herein.

5. The court erred in holding that all respondents, save the United States, were not acting officially but privately.

6. The court erred in holding all defendants other than the United States were mere trespassers on complainant's property.

7. The court erred in holding the respondents were not executing the laws of the United States, but were illegally encroaching on complainant's rights.

8. The court erred in granting an injunction when the acts complained of that could affect complainant were being or would be committed outside of the territorial jurisdiction of the court in the State of Arkansas.

9. The court erred in holding that the lateral, side, or guide levees proposed to be constructed in Louisiana would injure or harm the complainant or damage his property.

10. The court erred in holding that sec. 4 of the flood control act and the fifth amendment to the U. S. Constitution required payment to the complainant.

11. The court erred in declining to follow the decisions of the United States Supreme Court in Cubbins vs. Mississippi River Commission, 241 U. S. 351; Jackson vs. United States, 230 U. S. 1; Hughes vs. United States, 230 U. S. 34; Bedford vs. United States, 192 U. S. 217; Gibbons vs. United States, 75 U. S. 269, 19 L. ed. 453.

119 12. The court erred in holding that the acts of respondents amount to a taking of complainant's property in violation of the fifth amendment to the U. S. Constitution.

13. The court erred in exacting an appeal bond of the defendants.

Wherefore, and by reason of all of which, respondents pray that the defendants, both interlocutory and final, aforesaid, for the errors aforesaid, and for other errors in the record and proceedings herein may be reversed, and the demands of the complainant rejected and dismissed at his cost and that they may have such other and further relief as the law and equity may warrant.

PHILIP H. MECOM,
United States Attorney.
J. O. MODISETTE,
Special Assistant to the U. S. Atty.

FEB. 24, 1930.

[Bond on appeal for $500.00 approved and filed Feb. 24, 1930; omitted in printing.]

120 In United States District Court

Waiver of notice of appeal, etc.

Filed February 24, 1930

Counsel for the complainant and appellee take notice of the appeal granted herein, and of the order dated and signed February 24, 1930, and acknowledge receipt of a copy of the petition, order, and assignment of errors attached thereto, and waiver citation of appeal and the service of process for the complainant and appellee.

Witness our hands at New Orleans, Louisiana, on this the 28 day of February, A. D. 1930.

J. M. ST. PAUL, Jr.,
HARRY RUSSELL,
STREET & BURNSIDE,
WM. C. DUFOUR,
Counsel for Complainant, Appellee.

[File endorsement omitted.]

In United States District Court for the Western District of Louisiana, Monroe Division

No. 355 in Equity

R. FOSTER KINCAID, Sr.

vs.

UNITED STATES ET AL.

Decree

Filed February 4, 1930

This cause came on to be heard at this term and was argued by counsel, and thereupon, upon consideration thereof, it was ordered, adjudged, and decreed as follows:

That the complainant, R. Foster Kincaid, sr., do have and recover judgment against the defendants, James W. Good, Sec-
121 retary of War, and his successor, Patrick J. Hurley, Major General Edgar Jadwin, and his successor, Major General Lytle Brown, the Mississippi River Commission, Brigadier General T. H. Jackson, Charles H. West, Robert L. Faris, Edward Flad, John H. Stipes, Colonel Jarvis Bain, and Major Ernest Graves, members of the Mississippi River Commission, and Major John C. H. Lee, district Engineer, perpetually enjoining and restraining them and each of them, their agents, servants and employees, counsel and attorneys, from proceeding with the construction authorized by or carrying out the plan adopted by the act of Congress, approved May 15, 1928, known as the Mississippi River flood-control act, in the Boeuf Basin flood way, including all levee work or levee construction and the awarding and letting of contracts for the same, unless and until the property of the said complainant has been acquired by the United States Government or the flowage rights over the same acquired either by purchase or condemnation for such purpose.

It is further ordered, adjudged, and decreed by the court that a permanent writ of injunction issue from this court, directed to the defendants herein, fully carrying out and making effective all the terms and conditions of this decree.

Thus done, rendered, read aloud and signed in open court at Monroe, Louisiana, on this the 4 day of February, A. D. 1930.

BEN C. DAWKINS,
United States Judge.

[File endorsement omitted.]

In United States District Court

[Title omitted.]

Minute entry

At Monroe, Louisiana, on this the 4th day of February, A. D. 1930, the above entitled and numbered cause came on for hearing, before Hon. Ben C. Dawkins, Judge of said court.

Present: H. H. Russell, for complainant; J. O. Modisette, for respondents; H. H. Eshelman, deputy clerk.

The following proceedings were had:

Judgment for plaintiff was read and signed in open court, whereupon counsel for respondents asked to have an appeal to the United States Circuit Court of Appeals for the Fifth Circuit, sitting at New Orleans, noted and returnable according to law, and that the court fixed the appeal bond. Accordingly the court granted the appeal as prayed for and fixed the bond in the sum of five hundred ($500.00) dollars.

122 Counsel for complainant, being present in open court, took notice of the appeal and waived citation.

Filed Feb. 4, 1930. W. B. Lee, clerk, U. S. Dist. Court, West. Dist. of Louisiana.

In United States District Court

No. 355. In Equity

R. FOSTER KINCAID, SR.,

vs.

UNITED STATES OF AMERICA ET AL.

Injunction

To JAMES W. GOOD, Secretary of War, and his successor, PATRICK J. HURLEY; Major General EDGAR JADWIN and his successor, Major General LYTLE BROWN; THE MISSISSIPPI RIVER COMMISSION; Brigadier General T. H. JACKSON, CHARLES H. WEST, ROBERT L. FARIS, EDWARD FLAD, J. H. STIPES, Colonel JARVIS BAIN, Major ERNEST GRAVES, members of the Mississippi River Commission; and Major JOHN C. H. LEE, district engineer, greeting:

By virtue of an order issued out of the honorable the United States District Court for the Western District of Louisiana, in the

above numbered and entitled cause on the docket of said court, a copy of said order certified under seal of the court accompanying this writ,

In the name of the President of the United States of America,

You, and each of you, your attorneys, agents, servants, and employees, and all other persons acting by or under your authority, direction or control are hereby perpetually enjoined and restrained from proceeding with the construction authorized by or carrying out the plan adopted by act of Congress approved May 15, 1928, known as the Mississippi River flood-control act, in the Boeuf Basin floodway, including all levee work or levee construction, and the letting of contracts for the same, unless and until the property of the plaintiff herein has been acquired by the United States Government, or the flowage rights over the same acquired either by purchase or condemnation for such purpose.

Herein fail not under penalty of the law.

Witness the honorable Ben C. Dawkins, judge of the United States District Court for the Western District of Louisiana and the seal of said court, at the city of Shreveport, Louisiana, on this the 10th day of February, A. D. 1930, and the 154th year of American independence.

W. B. LEE,
Clerk, U. S. Dist. Court, Western District of Louisiana.

123 In United States Circuit Court of Appeals for the Fifth Circuit

No. 5928

UNITED STATES OF AMERICA ET AL., APPELLANTS

vs.

R. FOSTER KINCAID, SR., APPELLEE

Appeal from the District Court of the United States for the Western District of Louisiana

Order extending time for filing transcript

Filed April 22, 1930

For cause shown, it is ordered that the time for docketing the above-entitled cause and filing a transcript of the record thereof in this court, be and the same is extended until May 25th, 1930.

Done at New Orleans, Louisiana, this 17th day of March, A. D. 1930.

(Signed) RUFUS E. FOSTER,
United States Circuit Judge.

Clerk's Office. Attest. A true copy:

OAKLEY F. DODD,
Clerk, U. S. Circuit Court of Appeals, Fifth Circuit.

NEW ORLEANS, LA., *April 21st, 1930.*
[File endorsement omitted.]

In United States Circuit Court of Appeals for the Fifth Circuit

[Title omitted.]

Appeal from the District Court of the United States for the Western District of Louisiana

Order extending time

Filed May 17, 1930

For cause shown it is ordered that the time for docketing the above-entitled cause and filing a transcript of the record thereof in this court be, and the same is, extended until July 15th, 1930.

Done at New Orleans, Louisiana, this 15th day of May, A. D. 1930.

(Signed) RUFUS E. FOSTER,
United States Circuit Judge.

Clerk's office. Attest. A true copy:

OAKLEY F. DODD,
Clerk, U. S. Circuit Court of Appeals, Fifth Circuit.

NEW ORLEANS, LA., *May 16th, 1930.*
[File endorsement omitted.]

124 In United States District Court

[Title omitted.]

Order for hearing

Filed May 14, 1930

Upon motion of counsel for appellants in the above numbered and entitled cause, it is ordered that a hearing on the narrative of the testimony of the witnesses taken on the trial of this cause, as presented by the appellants, be had for approval, amendment, or rejection by the court, at Monroe, Louisiana, on 24 day of May, 1930, at 10.00 a. m., pursuant to equity rule number 75; and

It is ordered that notice of this hearing be given opposing counsel, according to said rule, in order that they, or some of them, may be present at the hearing.

Thus done, ordered, and signed at Lake Charles, Louisiana, on this the 13th day of May, A. D. 1930.

BEN C. DAWKINS,
United States District Judge.

[File endorsement omitted.]
[Title omitted.]

In United States District Court

Stipulation regarding map

Filed May 27, 1930

It is stipulated that a certified copy of the map used by Captain Dean and other witnesses, and referred to at page 401 of the original transcript and marked Exhibit D5 go up in the original, the said certified copy having been substituted for the original by authority of the court.

WM. C. DUFOUR,
W. G. STREETH,
Attorneys for Plaintiff.
PHILIP H. MECOM,
United States Attorney.
J. O. MODISETTE,
Special Asst. to the U. S. Attorney.

[File endorsement omitted.]

125 In United States District Court, Western District of Louisiana

Minutes of the court

MONROE, LOUISIANA,
Monday, October the 14th, A. D. 1929.

Court met pursuant to adjournment.

Present: Hon. Ben C. Dawkins, judge, presiding; and other court officials.

[Title omitted.]

Appearances: For complainant—Judge T. J. Freeman, Wm. C. Dufour, Esquire; Messrs. Streett and Burnside. For defendants—Philip H. Mecom, United States attorney; J. O. Modisette, special assistant to the United States attorney.

Counsel, as above noted, being present and announcing ready, this case, according to previous assignment, was regularly taken up, on

this date, on the merits as to whether or not a permanent injunction should not issue herein.

W. G. Streett, Esq., tendered and filed complainant's documentary evidence.

Oral testimony on behalf of complainant was then partially adduced, and the hour of adjournment having arrived, the case was continued until Tuesday morning, October 15th, at ten o'clock.

Ordered that court adjourn.

MONROE, LOUISIANA,
Tuesday, October the 15th, A. D. 1929.

Court met pursuant to adjournment.

Present: Hon. Ben C. Dawkins, judge, presiding; and other court officials.

[Title omitted.]

All counsel heretofore appearing in this case, together with H. H. Russell, Esquire, of counsel for the complainant, appearing on this date, being present, the trial of this matter was resumed.

Testimony on behalf of the complainant was resumed and concluded. Upon the conclusion of the direct testimony of the complainant herein, Special Assistant U. S. Attorney J. O. Modisette presented and read to the court a preliminary statement of the Government's case and asked leave of the court to file same. The filing of said document was objected to by Wm. C. Dufour, Esq., of counsel for the plaintiff herein; whereupon the court ordered it filed, and the same to be considered as a brief on behalf of the Government.

126 At the request of the United States attorney, Mr. Modisette reoffered and renewed Government's motion to dismiss, and requested the court to rerule on same; whereupon, the court overruled the motion. Counsel for the Government then excepted and reserved its rights under said motion, and with that reservation began the introduction of the Government's evidence. * * *

Testimony on behalf of the defendants was then partially adduced, and the hour of adjournment having arrived, the case was continued until Wednesday morning, at ten o'clock, October 16th.

Ordered that court adjourn.

MONROE, LOUISIANA,
Wednesday, October the 16th, A. D. 1929.

Court met pursuant to adjournment.

Present: Hon. Ben C. Dawkins, judge, presiding; and other court officials.

[Title omitted.]

Counsel for complainant and defendants being present, the trial of this case was this day resumed.

Evidence on behalf of the defendants was resumed and partially adduced, and the hour of adjournment having arrived, it was ordered that the case be continued until Thursday, October 17th, for further testimony.

Ordered that court adjourn.

MONROE, LOUISIANA,
Thursday, October the 17th A. D. 1929.

Court met pursuant to adjournment.

Present: Hon. Ben C. Dawkins, judge, presiding; and other court officials.

[Title omitted.]

Counsel as aforesaid, representing all parties litigant, being present in open court, the trial of this case was this day resumed.

On motion of Mr. Modisette, special assistant to the United States attorney, and with the consent of counsel for the complainant, stipulation and agreement of counsel, under date of October 3rd, 1929, was ordered filed nunc pro tunc.

Counsel for the Government then announced to the court that the testimony of the defendants was closed; whereupon counsel for the complainant stated that they had nothing in rebuttal, and advised the court that their evidence was concluded.

Thereupon the case was then argued, submitted, and taken under advisement by the court, with leave to counsel on both sides to file briefs if they so desired.

Ordered that court adjourn.

127 In United States District Court

[Title omitted.]

Pracipe

Filed May 14, 1930

Mr. W. B. LEE,
Clerk of the United States District Court,
Shreveport, Louisiana.

DEAR MR. LEE: You will please include in the transcript of appeal the following precipe:

1st. Complainant's bill.
2nd. Judge's order to show cause.
3rd. Defendants' motion to dismiss.
4th. Opinion and decree of court overruling motion to dismiss.
5th. Defendants' answer.
6th. Narrative of the testimony.
7th. Opinion and decree on the merits.
8th. Petition, assignment of errors, order, and bond for appeal.
9th. Writ of injunction.

MAP IS TOO LARGE TO BE FILMED.

10th. First application for enlargement or extension of return day.
11th. Second application for enlargement or extension of return day.
12th. Order fixing the hearing on the narrative.
13th. Order approving the narrative.
14th. Stipulation of counsel regarding map.
15th. Minutes of court.

Respectfully submitted.

PHILIP H. MECOM,
United States Attorney.
J. O. MODISETTE,
Special Asst. to the U. S. Attorney.

I hereby certify that a certified copy of this præcipe was served on opposing counsel by mail May 14, 1930, by duly posting same addressed to them.

May 14, 1930.

J. O. MODISETTE, *Solicitor.*

[File endorsement omitted.]

8 In United States District Court

[Title omitted.]

Præcipe

Filed May 30, 1930

W. B. LEE,
Clerk of the United States District Court,
Shreveport, Louisiana.

DEAR SIR: You will please include in the transcript of appeal the following præcipe:

The stipulation appearing at page 1, line 23, and extending on page 2 to line 10 of the record.

Respectfully submitted.

WM. C. DUFOUR,
Solicitor for Complainant.

[File endorsement omitted.]

NOTE OF CLERK: The above stipulation is found at the beginning of page 43, the narrative of the testimony.

[Clerk's certificate to foregoing transcript omitted in printing.]

[Minute entry of argument and submission, Dec. 16, 1930, omitted in printing.]

130 In United States Circuit Court of Appeals for the Fifth Circuit

No. 5928

UNITED STATES OF AMERICA, ET AL., APPELLANTS

versus

R. FOSTER KINCAID, SR., APPELLEE

Appeal from the District Court of the United States for the Western District of Louisiana

Philip H. Mecom, United States attorney; J. O. Modisette, special assistant United States attorney, and Arthur B. Hammond, special ass't to U. S. attorney (Philip H. Mecom, United States attorney, J. O. Modisette, special assistant United States attorney, and G. A. Iverson, special assistant to the Attorney General on the brief), for appellants.

Thomas J. Freeman, Wm. C. Dufour, John St. Paul, jr., Harry H. Russell, W. G. Streett, and O. C. Burnside, for appellee.

Before BRYAN, FOSTER, and WALKER, Circuit Judges

Opinion of the court

Filed May 15, 1931

By the COURT:

This is an appeal from a final decree rendered in a suit brought by the appellee, the owner of a tract of improved land, located
131 in the Boeuf River Basin, in Louisiana, which, by the execution of the plan for the control of flood waters of the Mississippi River adopted pursuant to provisions of the flood control act, approved May 15, 1928 (33 U. S. C. A. §§702a et seq.), would be subject to be flooded by a greater volume of water than ever before. That decree awarded in favor of the appellee an injunction restraining the Secretary of War, the Chief of Engineers, the Mississippi River Commission, the district engineer, and their agents, servants, etc., from proceeding with the construction authorized by or carrying out the plan adopted by or pursuant to that act (§§702 702d) in the Boeuf River Basin floodway, including all levee work or levee construction and the awarding or letting of contracts for the same, unless and until the said property of the appellee shall be acquired by the United States Government, or the flowage rights over the same shall be acquired by purchase or condemnation for such purpose. For reasons stated in opinions rendered by the District Judge (Kincaid v. United States, 35 Fed. (2), 285; Ib. 37 Fed. (2) 602), we conclude that appellee was entitled to the relief granted by that decree. The record showing no reversible error, that decree is affirmed.

132 In United States Circuit Court of Appeals

No. 5928

UNITED STATES OF AMERICA, ET AL.

versus

R. FOSTER KINCAID, SR.

Judgment

May 15, 1931

This cause came on to be heard on the transcript of the record from the District Court of the United States for the Western District of Louisiana, and was argued by counsel;

On consideration whereof, it is now here ordered, adjudged, and decreed by this court, that the decree of the said district court in this cause be, and the same is hereby, affirmed.

133 [Clerk's certificate to foregoing transcript omitted in printing.]

134 In Supreme Court of the United States

Order extending time within which to apply for writ of certiorari

Filed August 18, 1931

On consideration of the motion of counsel for petitioner in the above entitled case, and good cause therefor having been shown, it is ordered that the time within which petition for writ of certiorari may be filed herein be, and the same is, hereby extended for a period of sixty days from this date.

Dated this fourteenth day of August, 1931.

PIERCE BUTLER,
Associate Justice of the
Supreme Court of the United States.

135–138 [Omitted.]

139 Supreme Court of the United States

Order allowing certiorari

Filed November 23, 1931

The petition herein for a writ of certiorari to the United States Circuit Court of Appeals for the Fifth Circuit is granted, and the case is advanced and assigned for argument on Monday, January 4th next after the cases heretofore assigned for that day.

And it is further ordered that the duly certified copy of the t
script of the proceedings below which accompanied the petition
be treated as though filed in response to such writ.

h [File endorsement omitted.]

i [Indorsement on cover:] Enter Attorney General. No. 36,271. U. S. Circuit Court of Appeals, Fifth Cir Term No. 457. Patrick J. Hurley, et al., petitioners, vs. R. F Kincaid, sr. Petition for a writ of certiorari and exhibit the Filed October 13, 1931. File No. 36,271.

U. S. GOVERNMENT PRINTING OF